BODY BUILDER MANUAL

FOR

2017 Full Size C/K SUV

Electrical Body Builder Manual

Chevrolet Tahoe and Suburban,

GMC Yukon and Yukon XL,

Cadillac Escalade

Revision 1.0 *www.gmupfitter.com* *October 27, 2016*

Note to User:
As part of our mission to provide an up-to-date website that includes detailed Body Builder Manuals, Technical Bulletins, and Best Practice Manuals, we are now using sectional excerpts directly from the General Motors Service Information publications for our Electrical Body Builder Manuals.

You will note that the section numbers are non-sequential as we have provided only those that are believed to be the most pertinent to the Upfitter community and best suited to their needs.*

This new usage of the Service Information provides the opportunity for us to remain consistent with the changes that take place throughout the model year and to provide you updated information in a more timely fashion.

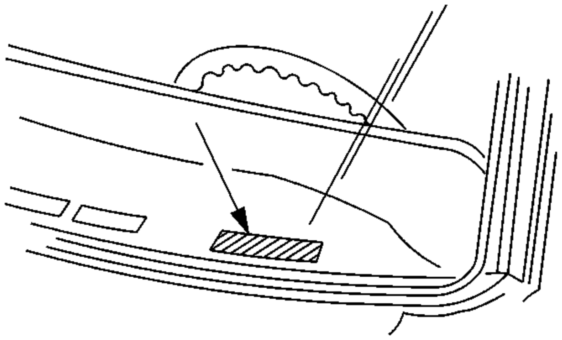
**** If you would like to have access to all of the electrical Service Information, please apply for a subscription from ACDelco at http://acdelcotechconnect.com/html/tss_tech_esi.jsp***

General Information

General Information

Introduction

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage (Chevrolet)



The vehicle identification number (VIN) plate is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel (I/P). The VIN number can be seen through the windshield from the outside of the vehicle:

Vehicle Identification Number (VIN) System

Position	Definition	Character	Description
1	Country of Origin	1	United States
2	Manufacturer	G	General Motors
3	Make	N	Chevrolet MPV
4	GVWR/Brake System/Body Style	L	6,001–7,000 lbs Hydraulic
		S	7,001–8,000 lbs Hydraulic
		8	10,001–14,000 lbs Hydraulic
5	Line Chassis	C	4x2
		K	4x4
6	Series	A	Tahoe LS
		B	Tahoe LT
		C	Tahoe Premier
		D	Tahoe Police Vehicle
		E	Tahoe FL
		F	Tahoe Special Services Vehicle
		G	Suburban LS

		H	Suburban LT
		J	Suburban Premier
		K	Suburban FL
		L	Suburban HD LS
		M	Suburban HD LT
		7	Tahoe Export (Non US, Non Canada)
		8	Suburban Export (Non US, Non Canada)
7	Restraint System	E	Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (All seating rows)
		K	Active Manual Belts, Airbag – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Front Inboard Seat Side (1st row), Roof Side (All seating rows)
8	Engine Type	C	RPO L83, Engine – Gas, 8 CYL, 5.3L,SIDI VVT, AFM, E85 MAX, Aluminum, GM
		G	RPO L96, Engine – Gas, 8 CYL, 6.0L, SFI, E85 MAX, IRON, GM
		J	RPO L86, Engine – Gas, 8 CYL, 6.2L, SIDI VVT, AFM, E85 MAX, Aluminum, GM
9	Check Digit	—	Check Digit
10	Model Year	H	2017
11	Plant Location	R	Arlington, TX
12–17	Plant Sequence Number	100,001	Plant Sequence Number

5.3L L83, 6.2L L86 Engine ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 225900) is invalid for this publication..

6.0L (L96) Engine ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 144252) is invalid for this publication..

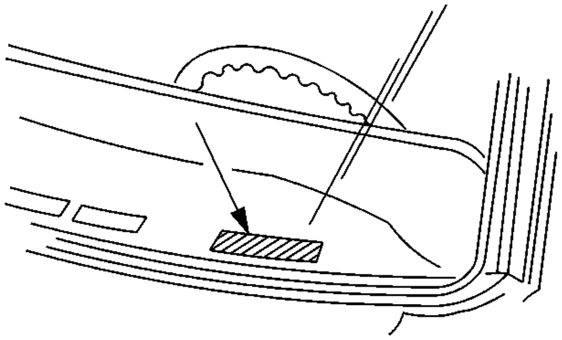
6L80 MYC Transmission ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 135940) is invalid for this publication..

8L90 (M5U)Transmission ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 260620) is invalid for this publication..

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage (Cadillac)



The vehicle identification number (VIN) plate is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel (I/P). The VIN number can be seen through the windshield from the outside of the vehicle:

Vehicle Identification Number (VIN) System

Position	Definition	Character	Description
1	Country of Origin	1	United States
2	Manufacturer	G	General Motors
3	Make	Y	Cadillac MPV
4	GVWR/Brake System/Body Style	S	7,001–8,000 lbs Hydraulic
5	Line Chassis	3	4x2
		4	4x4
6	Series	A	Escalade
		B	Escalade, Luxury
		C	Escalade, Premium Luxury
		D	Escalade, Platinum
		G	Escalade ESV
		H	Escalade ESV, Luxury
		J	Escalade ESV, Premium Luxury
		K	Escalade ESV, Platinum
		7	Escalade, (Non US, Non Canada)
		8	Escalade ESV, (Non US, Non Canada)
7	Restraint System	K	Active Manual Belts, Airbag – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Front Inboard Seat Side (1st row), Roof Side (All seating rows)

8	Engine Type	J	RPO L86, Engine – Gas, 8 CYL, 6.2L, SIDI VVT, AFM, E85 MAX, Aluminum, GM
9	Check Digit	—	Check Digit
10	Model Year	H	2017
11	Plant Location	R	Arlington, TX
12–17	Plant Sequence Number	100,001	Plant Sequence Number

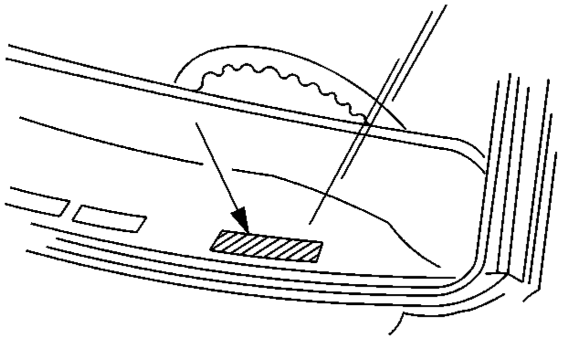
6.2L L86 Engine ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 225900) is invalid for this publication..

8L90 M5U Transmission ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 260620) is invalid for this publication..

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage (GMC Truck)



The vehicle identification number (VIN) plate is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel (I/P). The VIN number can be seen through the windshield from the outside of the vehicle:

Vehicle Identification Number (VIN) System

Position	Definition	Character	Description
1	Country of Origin	1	United States
2	Manufacturer	G	General Motors
3	Make	K	GMC MPV
4	GVWR/Brake System/Body Style	S	7,001–8,000 lbs Hydraulic
5	Line Chassis	1	4x2
		2	4x4
6	Series	A	Yukon SLE
		B	Yukon SLT
		C	Yukon Denali
		F	Yukon XL SLE
		G	Yukon XL SLT
		H	Yukon XL Denali
		7	Yukon Export (Non US, Non Canada)
		8	Yukon XL Export (Non US, Non Canada)
7	Restraint System	E	Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (All seating rows)
		K	Active Manual Belts, Airbag – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Front Inboard Seat Side (1st row), Roof Side (All seating rows)

8	Engine Type	C	RPO L83, Engine – Gas, 8 CYL, 5.3L,SIDI VVT, AFM, E85 MAX, Aluminum, GM
		J	RPO L86, Engine – Gas, 8 CYL, 6.2L, SIDI VVT, AFM, E85 MAX, Aluminum
9	Check Digit	—	Check Digit
10	Model Year	H	2017
11	Plant Location	R	Arlington, TX
12–17	Plant Sequence Number	100,001	Plant Sequence Number

5.3L L83, 6.2L L86 Engine ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 225900) is invalid for this publication..

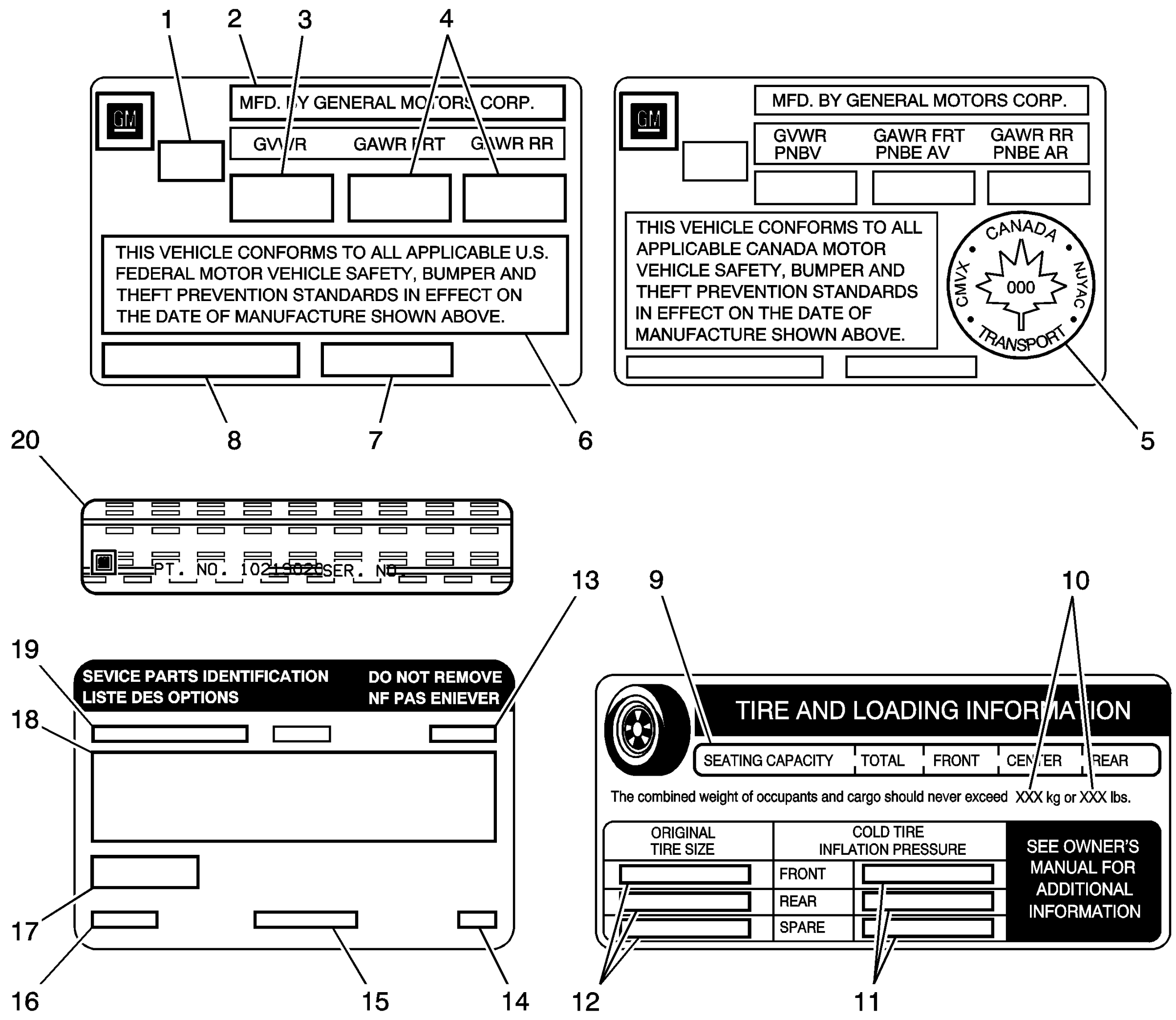
6L80 MYC Transmission ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 135940) is invalid for this publication..

8L90 (M5U)Transmission ID and VIN Derivative Location

Refer to CELL Link Error - Link target cell (cell ID 260620) is invalid for this publication..

Vehicle Certification, Tire Placard, Anti-Theft, and Service Parts ID Label


1
2
3
4
MFD. BY GENERAL MOTORS CORP.
GVWR
GAWR FRT
GAWR RR
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
8
7
6
MFD. BY GENERAL MOTORS CORP.
GVWR PNBV
GAWR FRT PNBE AV
GAWR RR PNBE AR
THIS VEHICLE CONFORMS TO ALL APPLICABLE CANADA MOTOR VEHICLE SAFETY, BUMPER AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
CANADA
NJYAC
TRANSPORT
CMVX
000
5
20
PT. NO. 10215020
SER. NO.
19
SEVICE PARTS IDENTIFICATION
LISTE DES OPTIONS
DO NOT REMOVE
NF PAS ENIEVER
18
13
17
16
15
14
9
10
TIRE AND LOADING INFORMATION
SEATING CAPACITY
TOTAL
FRONT
CENTER
REAR
The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs.
ORIGINAL TIRE SIZE
COLD TIRE INFLATION PRESSURE
FRONT
REAR
SPARE
SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
12
11

Vehicle Certification, Tire Placard, Anti-Theft, and Service Parts ID Label

Callout	Description
Vehicle Certification Label The vehicle certification label is located on the driver side B-pillar and displays the following assessments: • Gross Vehicle Weight Rating (GVWR) • Gross Axle Weight Rating (GAWR), front and rear • The gross vehicle weight (GVW) is the weight of the vehicle and everything it carries. The gross vehicle weight must not exceed the GVWR. Include the following items when figuring the GVW: – The base vehicle weight (factory weight) – The weight of all vehicle accessories – The weight of the driver and the passengers – The weight of the cargo	
1	Name of Manufacturer
2	Gross Vehicle Weight Rating
3	Gross Axle Weight Rating (Front, Rear)
4	Canadian Safety Mark (w/RPO Z49)

5	Certification Statement
6	Vehicle Class Type (Pass Car, etc.)
7	Vehicle Identification Number
8	Date of Manufacture (Mo/Yr)
Tire Placard The tire placard label is located on the driver side B-pillar and displays the following assessments:	
9	Specified Occupant Seating Positions
10	Maximum Vehicle Capacity Weight
11	Tire Pressure, Front, Rear, and Spare (Cold)
12	Original Equipment Tire Size
Service Parts ID Label The vehicle service parts identification label is located in the instrument panel (I/P) compartment. The label is use to help identify the vehicle original parts and options.	
13	Vehicle Identification Number
14	Engineering Model Number (Vehicle Division, Line and Body Style)
15	Interior Trim Level and Decor
16	Exterior (Paint Color) WA Number
17	Paint Technology
18	Special Order Paint Colors and Numbers
19	Vehicle Option Content
Anti-Theft Label	
20	The Federal law requires that General Motors label certain body parts on this vehicle with the VIN. The purpose of the law is to reduce the number of motor vehicle thefts by helping in the tracing and recovery of parts from stolen vehicles. Labels are permanently affixed to an interior surface of the part. The label on the replacement part contains the letter R, the manufacturer's logo, and the DOT symbol. The anti-theft label must be covered before any painting, and rustproofing procedures, and uncovered after the procedures. Failure to follow the precautionary steps may result in liability for violation of the Federal Vehicle Theft Prevention Standard and possible suspicion to the owner that the part was stolen.

RPO Code List

The following table provides the description of the Regular Production Option (RPO) codes that are available on the vehicle. The vehicle's RPO list is printed on the Service Parts Identification Label.

RPO	Description
01U	PRIMARY COLOR-EXTERIOR, SPECIAL (02)
1LR	MODIFICATION-BRAKE SYSTEM, OPTIONAL LININGS
4AA	INTERIOR TRIM-JET BLACK
4B8	INTERIOR TRIM-COCOA / SHALE
4D7	INTERIOR TRIM-JET BLACK/DK ASH
4DP	INTERIOR TRIM-COCOA / DUNE
4ER	INTERIOR TRIM-JET BLACK / VECCHIO
4EX	INTERIOR TRIM-MINK
4EY	INTERIOR TRIM-COCOA / PILLION BROWN SAUVAGE
4EZ	INTERIOR TRIM-COCOA / DARK ATMOSPHERE
4FP	INTERIOR TRIM-PLATINUM JET BLACK
4FQ	INTERIOR TRIM-CHOOCCACHINO
4GB	INTERIOR TRIM-JET BLACK/ COBALT RED
4H9	INTERIOR TRIM-COCOA / MAPLE SUGAR
4HZ	INTERIOR TRIM-JET BLACK/MEDIUM ASH GRAY
5A7	WHEEL SPARE-NONE
5AZ	ACCESSORY-SAFETY KIT - UNIVERSAL
5JL	ACCESSORY-BRAKE UPGRADE PKG 1 - COMPLETE
5JR	ACCESSORY-MIRROR COVERS - ALTERNATE FINISH 1
5JY	ACCESSORY-TONNEAU - RR COMPT - SOFT FOLDING
5KW	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 2
5KY	ACCESSORY-EXTERIOR APPEARANCE PACKAGE 4
5L6	EQUIPMENT-PACKAGE, SPECIAL FLEET
5VD	ACCESSORY-PROTECTOR - FRONT BUMPER
5VI	ACCESSORY-TIE DOWN RINGS - CARGO AREA

5W4	SALES PACKAGE-SPECIAL SERVICE, MUNICIPAL
5W7	ACCESSORY-AIR FILTER - PERFORMANCE
5WI	ACCESSORY-TIE DOWN RINGS - CARGO AREA, MOVEABLE
5Y3	ACCESSORY-TOW BALL - TRAILER HITCH
9C1	SALES PACKAGE-POLICE VEHICLE
9G3	SALES PACKAGE-"OFF ROAD"
9J4	BUMPER RR-(NONE)
9L3	TIRE SPARE-NONE
9L7	EQUIPMENT-ACSRY WRG JUNC BLK
A31	WINDOW-POWER OPERATED, ALL DOORS (DO NOT USE ON NEW/MAJOR PROGRAMS)
A45	MEMORY-SEAT ADJUSTER, MIRROR, POWER, DRIVER, PERSONALIZATION
A48	WINDOW RR-FULL WIDTH, SLIDING, POWER
A4M	SALES PROCESSING OPT-#3
A52	SEAT-FRT BENCH
A60	LOCK CONTROL RR CMPT-LID, TAILGATE, KEY ACTIVATED
A68	SEAT RR-SPLIT, FOLDING
A91	LOCK CONTROL RR CMPT-TAILGATE, REM CONT ELEC OPEN/CLOSE
A95	SEAT-FRT BKT, HIGH BACK, DRIVER & PASS RECL
AAK	ACCESSORY-FLOOR LINER - CONTOURED - ALT DESIGN 1
ACO	IDENTIFICATION-ACCESSORY CATALOG OFFERING
AE7	SEAT-FRT SPLIT, DRIVER, PASS
AG1	ADJUSTER FRT ST-POWER, MULTI-DIRECTIONAL, DRIVER
AG2	ADJUSTER PASS ST-POWER, MULTI-DIRECTIONAL
AK5	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT
AKJ	WINDSHIELD STYLE-SHADE BAND
AKK	WINDSHIELD STYLE-ACOUSTIC PVB

AKO	WINDOW TYPE-PRIVACY
AKP	WINDOW TYPE-SOLAR ABSORBING
AKX	WINDSHIELD TYPE-SOLAR ABSORBING
AL0	SENSOR INDICATOR-INFLATABLE RESTRAINT, FRT PASS/CHILD PRESENCE DETECTOR
AM7	SEAT RR-FOLDING
AMF	LOCK CONTROL-ADDITIONAL, PROGRAMMABLE, REMOTE ENTRY, MULTIPLE UNITS
AN3	SEAT-FRT, INDIVIDUAL (NON BKT)
AP9	NET-CONVENIENCE
AQC	ORNAMENTATION-EXTR, BODY COLOR
AQQ	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE (MY 09 AND FUTURE)
ARL	PLANT CODE-ARLINGTON, TX, USA
ARN	SEAT THIRD ROW-60/40 BENCH, MAN FOLD
AS8	SEAT THIRD ROW-60/40 BENCH, POWER FOLD
AT6	SEAT RR-BENCH, 60/40 MANUAL CONFIGURABLE
ATD	SEAT THIRD ROW-NONE
ATH	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE, PASSIVE ENTRY, ALL DOORS
ATN	SEAT RR-BUCKET, POWER CONFIGURABLE
ATT	SEAT RR-BENCH, 60/40 POWER CONFIGURABLE
ATV	SEAT RR-BUCKET, MANUAL CONFIGURABLE
AU3	LOCK CONTROL-SIDE DR, ELEC
AX4	RESTRAINT CONVERSION-SEAT, MAN, EUROPEAN
AX7	RESTRAINT PROVISIONS-AUTOMATIC BELTS, PRE-CRASH, PRE-TIGHTENING
AXK	VEHICLE TYPE-TRUCK
AXP	VEHICLE TYPE-MULTI-PURPOSE PASSENGER VEHICLE
AXX	VEHICLE TYPE-VEHICLE TYPE - NOT REQUIRED DO NOT USE
AY0	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, SEAT SIDE, ROOF SIDE

AYE	RESTRAINT-HEAD, RR SEAT, ANILINE LEATHER (WITH DVD) (DO NOT USE AFTER M.Y. 2016)
AYQ	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, FRT SEAT SIDE, FRT INBOARD SEAT SIDE, ROOF SIDE
AZ3	SEAT-FRT SPLIT, DRIVER, PASS, FULL FEATURE CENTER
B1J	LINER-RR WHEELHOUSE
B1R	PORT OF ENTRY-UNISON, BELARUS
B30	COVERING FLOOR-CARPET
B32	COVERING FRT-FLOOR MATS, AUX
B33	COVERING REAR-FLOOR MATS, AUX
B3F	SEAT-FRT SPLIT, DELUXE, DRIVER, PASS, FULL FEATURE CENTER
B3V	TEST-EXTENDED WATER
B58	COVERING-FLOOR MAT, FRT & RR, CARPETED INSERT
B5N	COVERING-FLOOR MAT, FRT & RR, RUBBER
B85	MOLDING B/S-EXTERIOR, BRIGHT
B86	MOLDING B/S-BODY COLOR
BAG	PARTS PKG-EXPORT
BG9	COVERING FLOOR-RUBBER
BJA	PARTS PKG-TRUCK APPLICATION VAR.1
BPH	APPEARANCE PACKAGE-CHEVROLET "OFF ROAD"
BRS	STEPS, RUNNINGBOARD-SIDE, RETRACTABLE, POWER
BTM	SWITCH-ENGINE START, KEYLESS
BTV	REMOTE START-ENGINE
BVE	STEPS, RUNNINGBOARD-SIDE
BVQ	STEPS, RUNNINGBOARD-SIDE, TUBULAR, CHROME
BVV	STEPS, RUNNINGBOARD-SIDE, TUBULAR, BLACK
BWN	STEPS-CORNER ASSIST, BUMPER
C25	WIPER SYS RR WINDOW-INTERMITTENT

C42	HVAC SYSTEM-HEATER, OUTSIDE AIR, DELUXE
C49	DEFOGGER-RR WINDOW, ELECTRIC
C67	HVAC SYSTEM-AIR CONDITIONER FRT, ELECTRONIC CONTROLS
C99	SWITCH-INFL RST I/P MDL MAN SUPPRESSION
C9I	SWITCH-ROLL OVER SENSING
CE1	WIPER SYS WINDSHIELD-PULSE, MOISTURE SENSITIVE
CF5	ROOF-SUN, GLASS, SLIDING, ELEC
CG6	ORNAMENTATION-EXTR, NAMEPLATE, VAR 1
CGN	LINER-PUBX, SPRAY ON
CGO	COLLECTION GVW-COLLECTION GVW LESS THAN OR EQUAL TO 10,000 LBS
CJ2	HVAC SYSTEM-AIR CONDITIONER FRT, AUTO TEMP CONT, AUX TEMP CONT
CJ4	HVAC SYSTEM-AIR CONDITIONING, FRT & RR ELECTRONIC CONTROLS
CK4	COUNTRY-GREECE
CL5	COUNTRY-PERU
CL6	COUNTRY-BOLIVIA
CMD	PLANT CODE-FLINT, MI, USA (TRK)
CS0	COUNTRY-CZECH REPUBLIC
CS2	COUNTRY-NIGERIA
CS5	COUNTRY-ANGOLA
CT1	COUNTRY-BELGIUM
CT2	COUNTRY-AUSTRIA
CT3	COUNTRY-GERMANY
CT5	COUNTRY-NETHERLANDS
CT6	COUNTRY-ITALY
CT7	COUNTRY-DENMARK
CT8	COUNTRY-PORTUGAL
CT9	COUNTRY-SPAIN
CTD	EQUIPMENT-CARGO TIE DOWN (MOVABLE)

CU1	COUNTRY-NORWAY
CU2	COUNTRY-FINLAND
CU3	COUNTRY-FRANCE
CU4	COUNTRY-SWEDEN
CU5	COUNTRY-SWITZERLAND
CU7	COUNTRY-KUWAIT
CU8	COUNTRY-SAUDI ARABIA
CU9	COUNTRY-UNITED KINGDOM
CV3	COUNTRY-MEXICO
CV4	COUNTRY-ISRAEL
CV5	COUNTRY-JAPAN
CV6	COUNTRY-CHILE
CW1	COUNTRY-KOREA
CW2	COUNTRY-GULF AREAS (BAHRAIN, KUWAIT, OMAN, QATAR, SAUDI ARABIA, UAE)
CW5	COUNTRY-VENEZUELA
CWA	WASHER-CAMERA, REAR
CX0	COUNTRY-AZERBAIJAN
CX2	COUNTRY-COLOMBIA
CX3	COUNTRY-ECUADOR
CX9	COUNTRY-LEBANON
CY2	COUNTRY-JORDAN
CZ3	COUNTRY-RUSSIA
D07	CONSOLE-FRT COMPT, FLOOR, CUSTOM
D2D	COUNTRY-PHILIPPINES
D2O	COUNTRY-CURACAO
D2Y	COUNTRY-ANTIGUA
D3B	COUNTRY-BERMUDA
D3D	COUNTRY-REPUBLIC OF TRINIDAD AND TOBAGO
D3H	COUNTRY-BELARUS
D3I	COUNTRY-BARBADOS
D3J	COUNTRY-CAYMAN ISLANDS

D3K	COUNTRY-DOMINICAN REPUBLIC
D3L	COUNTRY-EL SALVADOR
D3M	COUNTRY-GUATEMALA
D3P	COUNTRY-HAITI
D3Q	COUNTRY-HONDURAS
D3U	COUNTRY-ST MAARTEN
D4G	COUNTRY-BAHAMAS
D4N	COUNTRY-COSTA RICA
D4X	COUNTRY-ARUBA
D5D	COUNTRY-NICARAGUA
D5K	COUNTRY-SURINAM
D75	HANDLE O/S DOOR-BODY COLOR
DCK	CONSOLE-FRT COMPT, FLOOR, CUSTOM, W/COOLER
DD8	MIRROR I/S R/V-LT SENSITIVE
DE2	MIRROR O/S-LH & RH, MANUAL CONTROL, FOLDING, COLOR
DF2	MIRROR O/S-LH & RH, WIDE LOAD, FOLDING, STAINLESS STEEL
DH6	MIRROR I/S FRT VAN-LH & RH, SUNSHADE, ILLUM
DL3	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, POWER FOLDING, TURN SIG IND, LT SENSITIVE, COLOR
DL8	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED
DMQ	DECAL-ALASKAN
DNS	EQUIPMENT-SUPPLIER INSTALLED
DNU	EQUIPMENT-ADDITIONAL VIDEO SCREEN
DP6	MIRROR PROVISIONS-HOUSING, PAINTED
DP9	MIRROR PROVISIONS-HOUSING, CHROME
DPK	MIRROR PROVISIONS-HOUSING, BLACK
DPN	MIRROR O/S-LH & RH, WIDE LOAD, VERTICAL GLASS, MAN EXTENDING,MAN FOLDING, HEATED, TURN SIG IND, REMOTE CONTROL
DPU	COUNTRY-BONAIRE

DPX	COUNTRY-TURKS AND CAICOS ISLANDS
DQS	MIRROR O/S-LH & RH, WIDE LOAD, VERT GLS,MAN EXT,PWR FLD,HTD,TURN SIG IND,R/CON,MEMORY,AUX CLEAR LP,AUX CARGO LP
DR4	MIRROR O/S-LH & RH, REMOTE CONTROL, ELECTRIC, HEATED, LT SENSITIVE, POWER FOLDING, COLOR
DRZ	MIRROR I/S R/V-LT SENSITIVE, FULL VIDEO DISPLAY
DT4	ASHTRAY-CIGARETTE LIGHTER
E20	HANDLE O/S DOOR-CHROME
E29	EQUIPMENT-MODIFICATION BASE EQUIPMENT
E5D	ACCESSORY-ASSIST HANDLES - INTERIOR
E63	BODY EQUIPMENT-FLEETSIDE PICK-UP BOX
E6N	END GATE-PUBX FRT UPR MOLDING DELETE
E7C	COUNTRY-LIBYA
EF5	COUNTRY-PANAMA
EF7	COUNTRY-UNITED STATES OF AMERICA (USA)
EXP	EXPORT-
F60	SPRING FRONT-HEAVY DUTY
FE9	CERTIFICATION-EMISSION, FEDERAL
FHO	VEHICLE FUEL-GASOLINE E10
FHS	VEHICLE FUEL-GASOLINE E85
FHV	VEHICLE FUEL-BIFUEL & MONOVALENT PLUS CNG
FHX	VEHICLE FUEL-DIESEL B20
FWI	PLANT CODE-FT WAYNE, IN, USA
G0P	SALES PACKAGE-SPECIAL OPS EDITION
G0S	SALES PACKAGE-CAMO EDITION
G1C	PRIMARY COLOR-EXTERIOR, OVERCAST MET(402Y)
G1E	PRIMARY COLOR-EXTERIOR, LIMITED ADDICTION RED TINT (405Y)
G1F	PRIMARY COLOR-EXTERIOR, BURNISHED BRANDY MET(406Y)

G1K	PRIMARY COLOR-EXTERIOR, SACR'E BLUE MET(409Y)
G1W	PRIMARY COLOR-EXTERIOR, ABALONE WHITE TRICOAT(140X)
G7C	PRIMARY COLOR-EXTERIOR, PULL ME OVER RED SOLID (130X)
G7T	PRIMARY COLOR-EXTERIOR, BAROQUE RED MET (142X)
G7U	PRIMARY COLOR-EXTERIOR, PLUM BERRY MET (143X)
G80	AXLE POSITRACTION-LIMITED SLIP
GAJ	APPEARANCE PACKAGE-HIGH COUNTRY
GAN	PRIMARY COLOR-EXTERIOR, SWITCHBLADE SILVER MET (G) 636R
GAR	PRIMARY COLOR-EXTERIOR, CARBON FLASH MET (G) 501Q
GAT	APPEARANCE PACKAGE-GMC "ALL TERRAIN"
GAZ	PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624
GBA	PRIMARY COLOR-EXTERIOR, BLACK (G) 8555
GCS	PRIMARY COLOR-EXTERIOR, VELVET RED MET (681R)
GGC	GRILLE-CUSTOM
GJB	PRIMARY COLOR-EXTERIOR, MINERAL MET (433B)
GMU	PRIMARY COLOR-EXTERIOR, PEPPERDUST MET-2 (441B)
GOZ	PRIMARY COLOR-EXTERIOR, DAYDREAM BEIGE MET (892T)
GPA	PRIMARY COLOR-EXTERIOR, GASOLINE MET-2 (457B)
GT4	AXLE REAR-3.73 RATIO
GT5	AXLE REAR-4.10 RATIO
GTY	AXLE-WIDE TRACK
GU4	AXLE REAR-3.08 RATIO
GU5	AXLE REAR-3.23 RATIO
GU6	AXLE REAR-3.42 RATIO
GWT	PRIMARY COLOR-EXTERIOR, CHAMPAGNE SILVER MET (102V)

GWX	PRIMARY COLOR-EXTERIOR, SUBTERRANEAN MET (105V)
GXG	PRIMARY COLOR-EXTERIOR, IRIDIUM MET (121V)
GYK	PRIMARY COLOR-EXTERIOR, MYSTIC MOONLIGHT BLUE METALLIC (207V)
GYM	PRIMARY COLOR-EXTERIOR, SATIN STEEL GREY METALLIC (205V)
H0K	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, COCOA / DUNE
H0U	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK
H1Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 2, JET BLACK
H2G	INTERIOR TRIM CONFIG-VINYL, LEVEL 1, JET BLACK
H2Q	INTERIOR TRIM CONFIG-VINYL, LEVEL 1, JET BLACK /DK ASH
H2R	INTERIOR TRIM CONFIG-CLOTH, LEVEL 1, JET BLACK/ DK ASH
H2S	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK / DK ASH
H2T	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, COCOA / DUNE
H2U	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK
H2V	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK / DK ASH
H2W	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK / COBALT
H2X	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, JET BLACK
H2Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / DUNE
H2Z	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, VAR1, JET BLACK
H3A	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, COCOA / DUNE
H3B	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, JET BLACK
H3C	INTERIOR TRIM CONFIG-LEATHER VAR 1, LEVEL 3, JET BLACK / DK ASH

H4S	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, MINK
H4W	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / DARK ATMOSPHERE
H4X	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / PILLION BROWN SAUVAGE
H4Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / SHALE
HD7	HANDLE-O/S, DR, ILLUMINATED
HDQ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, COCOA / MAPLE SUGAR
HEW	INTERIOR TRIM CONFIG-CLOTH, LEVEL 3, JET BLACK
HEY	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, JET BLACK / VECCHIO
HHZ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, CHOCCACHINO
HJU	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, PLATINUM JET BLACK
HJV	INTERIOR TRIM CONFIG-CLOTH, LEVEL 3, COCOA / DUNE
HP5	ELECTRIFIED PROPULS-ELECTRIC, BAS, GEN 3
HQX	HEADLAMP COLOR-BEZEL, BODY COLOR
HQY	HEADLAMP COLOR-BEZEL, CHROME
HQZ	INTERIOR TRIM CONFIG-LEATHER, LEVEL 3, JET BLACK/MEDIUM ASH GRAY
I17	ENGINEERING YEAR-2017
IO3	RADIO-INFOTAINMENT SYSTEM - BASE HMI
IO5	RADIO-INFOTAINMENT SYSTEM - UPLEVEL HMI, ENHANCED CONNECTIVITY
IO6	RADIO-INFOTAINMENT SYSTEM - UPLEVEL HMI, ENHANCED CONNECTIVITY, EMBEDDED NAVIGATION
IOB	RADIO-INFOTAINMENT SYSTEM - MIDLEVEL HMI, MIDLEVEL CONNECTIVITY
J71	BRAKE PARKING-POWER OPERATED
J95	BRAKE-HYD POWER, SINGLE REAR WHEEL, 4 WHL DISC
J96	BRAKE-HYD POWER, DUAL REAR WHEEL, 4 WHL DISC

JB1	BRAKE-VAC POWER, 17" DISC/DISC, W/ESS, 7700 LBS
JD9	BRAKE-VAC POWER, 17" DISC/DISC, W/VSES, 7700 LBS
JF4	PEDALS-ADJUSTABLE, POWER
JHD	CONTROL-HILL DESCENT, GEAR HOLD
JK1	TIRE PRESS INDICATOR-LOW TIRE PRESSURE - NONE
JL1	CONTROL-INTEGRATED TRAILER BRAKE
K05	HEATER ENG-BLOCK
K34	CRUISE CONTROL-AUTOMATIC, ELECTRONIC
K40	ENGINE BRAKE-EXHAUST
K47	AIR CLEANER-HIGH CAPACITY
K4B	BATTERY-LN3, FLA, 12V, 70AH, 730 SAE CCA, AUX
K4C	CHARGER-INDUCTIVE PORTABLE WIRELESS DEVICE
K4D	BATTERY-LN3, FLA, 12V, 70AH, 730 SAE CCA, DUAL
K59	CRUISE CONTROL-AUTOMATIC, ADAPTIVE
K6H	ORNAMENTATION-R TAILGATE BOW TIE, DELETE
KA1	HEATER SEAT FRT-DRVR & PASS
KA6	HEATER SEAT-REAR
KB6	HEATER-SEAT, COOLING, FRT
KC4	COOLING SYSTEM-ENG OIL
KG4	GENERATOR-150 AMP
KHB	GENERATOR-150 AMP AND 220 AMP, DUAL
KI4	RECEPTACLE-ELECTRICAL, ACCESSORY 110 VOLT
KI5	RECEPTACLE-ELECTRICAL, ACCESSORY 230 VOLT
KNP	COOLING SYSTEM-TRANS, HD
KQV	HEATER-SEAT, VENTED, FRT
KRV	REFRIGERANT-LOW GWP
KSG	CRUISE CONTROL-AUTOMATIC, ADAPTIVE, WITH STOP/GO

KW5	GENERATOR-220 AMP
KW7	GENERATOR-170 AMP
KY4	GENERATOR-HYBRID MOTOR, BAS 3, 100 AMP
L5P	ENGINE-DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5, VAR. 1
L83	ENGINE-GAS, 8 CYL, 5.3L, SIDI VVT, AFM, E85 MAX, ALUM, GM
L86	ENGINE-GAS, 8 CYL, 6.2L, SIDI VVT, AFM, E85 MAX, ALUM, GM
L8B	ENGINE-GAS, 8 CYL, 5.3L, V8, BAS 3, ALUM, GEN 5
L96	ENGINE-GAS, 8 CYL, 6.0L, SFI, E85 MAX, IRON, GM
LC8	ENGINE-LPG/CNG, 8 CYL, V8, 6.0L, SFI, GEN 1, GMNA
LV1	ENGINE-GAS, 6 CYL, 4.3L, SIDI, V6, VVT, E85 MAX, IRON
LV3	ENGINE-GAS, 6 CYL, 4.3L, GEN 5, SIDI, V6, VVT, OHV, E85 MAX, ALUM
M1F	POWER TAKE OFF-RR PTO
M2P	TRANSMISSION-MAN 5 SPD, 4.69 1ST, 2.56 2ND, 1.53 3RD, 1.00 4TH, 0.73 5TH, TR3655
M5U	TRANSMISSION-AUTO 8 SPD, 8L90
M5X	TRANSMISSION-AUTO 8 SPD, 8L90, BAS+
MAA	MARKETING AREA-AFRICA
MAF	MARKETING AREA-SOUTHEAST ASIA
MAH	MARKETING AREA-US, PUERTO RICO/USVI
MAM	MARKETING AREA-MIDDLE EAST
MAW	MARKETING AREA-KOREA
MAY	MARKETING AREA-ANDEAN (SOUTH AMERICA 2)
MBC	MARKETING AREA-CANADA
MBD	MARKETING AREA-CENTRAL AMERICA/CARIBBEAN
MBI	MARKETING AREA-ISRAEL
MBM	MARKETING AREA-EUROPE GROUP
MBR	MARKETING AREA-RUSSIA GROUP

MCX	MARKETING AREA-MEXICO
MQ7	TRANSMISSION-MAN 5 SPD, TREMEC, 109MM, 6.16 1ST, 3.11 2ND, 1.71 3RD, 1.00 4TH, 0.76 5TH (TR4050)
MSL	PLANT CODE-SILAO, MEXICO
MW7	TRANSMISSION-AUTO 6 SPD, ALLISON, LCT 1000, 3.10 1ST, .71 5TH, .62 6TH, O/D, CONV CLUTCH
MXW	TRANSMISSION-MAN 5 SPD, 4.227 1ST, 2.375 2ND, 1.470 3RD, 1.000 4TH, 0.808TH, TREMEC, GEN 1
MYC	TRANSMISSION-AUTO 6 SPD, HMD, 6L80
MYD	TRANSMISSION-AUTO 6 SPD, HMD, 6L90
N01	LOCK CONTROL-FUEL PLUG
N05	LOCK CONTROL-FUEL FILLER CAP
N08	LOCK CONTROL-FUEL FILLER DR, REM CONT
N12	EXHAUST SYSTEM-REAR EXIT
N2L	FUEL TANK-REAR TANK 40 GAL (151L)
N2M	FUEL TANK-FRONT TANK 23.5 GAL (89L)
N2N	FUEL TANK-DUAL TANK, FRONT TANK 23.5 GAL (89L) REAR TANK 40 GAL (151L)
N30	STEERING WHEEL-DELUXE
N33	STEERING COLUMN-TILT TYPE
N37	STEERING COLUMN-TILT, TELESCOPING
N38	STEERING COLUMN-TILT, TELESCOPING, POWER
N79	WHEEL SPARE-18 X 8.0, J, STEEL, DESIGN 2
NAA	ACCESSORY-ROCKER GUARD - TUBULAR
NE1	CERTIFICATION-EMISSION, GEOGRAPHICALLY RESTRICTED REGISTRATION FOR VEHICLES UP TO 14,000 LBS GVW (USE 2003 MDL YR
NE4	EMISSION SYSTEM-EEC 14
NE9	EMISSION SYSTEM-EEC 09
NHT	PERFORMANCE PACKAGE-ENHANCED TOWING
NK5	STEERING WHEEL-STANDARD
NKC	NOISE CONTROL-SYSTEM, ACTIVE NOISE CANCELLATION

NP0	TRANSFER CASE-ACTIVE, SINGLE SPEED,SWITCH ACTIVATED,ALUM
NP5	STEERING WHEEL-LEATHER WRAPPED
NQF	TRANSFER CASE-ELECTRIC SHIFT CONT, TWO SPEED, ALUM
NQG	TRANSFER CASE-MANUAL SHIFT CONT, TWO SPEED, ALUM
NQH	TRANSFER CASE-ACTIVE, TWO SPEED, SWITCH ACTIVATED, ALUM
NQL	EMISSION SYSTEM-KOREAN, LEV
NT7	EMISSION SYSTEM-FEDERAL, TIER 2
NTB	EMISSION SYSTEM-FEDERAL, TIER 3
NU2	EMISSION SYSTEM-CALIFORNIA, ULEV2
NU5	EMISSION SYSTEM-CALIFORNIA, BIN 4
NUB	EMISSION SYSTEM-CALIFORNIA, ULEV70
NUF	EMISSION SYSTEM-CALIFORNIA, ULEV125
NUK	EMISSION SYSTEM-CALIFORNIA, ULEV250
NUM	EMISSION SYSTEM-CALIFORNIA, LEV3 MDV 10-14K GVW
NUR	EMISSION SYSTEM-CALIFORNIA, LEV395
NV8	STEERING-POWER, MAGNETIC SPEED, VARIABLE ASSIST
NZ4	WHEEL SPARE-17 X 7.5, J, STEEL, DESIGN 2
NZD	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 6
NZG	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 7
NZH	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 8
NZJ	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 9
NZM	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 10
NZN	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 11
NZP	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 12
NZQ	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 15
NZR	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 16
NZT	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 18
NZZ	SALES PACKAGE-SKID PLATE, "OFF ROAD" SPORT

P03	COVER, WHEEL-VAR 3
P06	TRIM DISCS-WHEEL
P3H	ORNAMENTATION-EXTR, BOWTIE
PB4	LOCK CONTROL-WHEEL
PHF	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 30
PPA	EQUIPMENT-ASSIST, OPEN & CLOSE, TAILGATE
PTO	ENGINE CONTROL-POWER TAKE OFF (PTO) CONTROLS
PTW	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 2
PYN	WHEEL-17 X 7.5, J, STEEL, DESIGN 7
PYQ	WHEEL-17 X 7.5, J, ALUMINUM, DESIGN 7
PYR	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 24
PYS	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 14
PYT	WHEEL-18 X 8.0, J, STEEL, DESIGN 2
PYU	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 19
PYV	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 23
PYW	WHEEL-17 X 6.5, J, STEEL, DESIGN 2
PZX	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 2
Q5U	WHEEL-17 X 8.0, J, ALUMINUM, DESIGN 2
Q5W	WHEEL-17 X 8.0, J, ALUMINUM, DESIGN 1
Q7L	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 2
Q7M	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 3
Q7R	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 13
QAR	TIRE ALL-P265/60R17 SL 108V BW AL3
QBL	TIRE ALL-P265/70R17 SL 113H BW OOR
QF2	TIRE ALL-LT275/65R18 E 123/120Q BW MT, VAR 1
QFC	TIRE ALL-LT265/60R20 E 121/XXX S YYY AT
QGM	TIRE ALL-LT265/70R18 E 124/121R BW AT
QHQ	TIRE ALL-LT245/75R17 E 121/118R BW ALS
QHX	TIRE ALL-P285/50R20 SL 111H BW AL3
QQO	TIRE ALL-LT235/80R17 E 120/117Q BW ALS

QSS	TIRE ALL-P275/55R20 SL 111S BW AL2
QST	TIRE ALL-P285/45R22 SL 110H BW AL3
QWF	TIRE ALL-LT265/70R18 E 124/121 S BW ALS
QXN	TIRE ALL-P265/65R18 SL 112S BW OOR
QXO	TIRE ALL-P265/65R18 SL 112H BW AL3
QXT	TIRE ALL-LT265/70R17 E 121/118 Q BW AT
QXU	TIRE ALL-LT265/70R17 E 121/118 Q BW AT
QZT	TIRE ALL-LT235/80R17 E 120/117Q BW AT
R6J	CONTROL-SALES ITEM NO. 10
R6K	CONTROL-SALES ITEM NO. 11
R6V	CONTROL-SALES ITEM NO. 21
R88	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 2
RAP	WHEEL-17 X 8.0, J, STEEL, DESIGN 1
RBR	WHEEL-22 X 9.0, J, STEEL, DESIGN 1
RBW	TIRE ALL-P265/65R18 SL 112T WOL AT
RBX	TIRE ALL-P265/65R18 SL 112T BW AT
RBZ	TIRE ALL-P255/70R17 SL 110S BW ALS
RC3	TIRE ALL-P265/70R17 SL 113S BW AT
RC4	TIRE SPARE-P265/70R17 SL 113S BW
RC5	TIRE ALL-LT265/70R17 C 112Q BW AT
RC7	TIRE ALL-P275/55R20 SL 111S BW AT
RCV	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 4
RCW	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 5
RD1	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 6
RD2	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 2
RD3	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 3
RD4	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 4
RD5	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 5
RD6	WHEEL-17 X 8.0, J, STEEL, DESIGN 2
RD7	WHEEL-17 X 8.0, J, STEEL, DESIGN 3
RDI	ACCESSORY-KEYLESS ENTRY

REG	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 7
RHH	TIRE ALL-P285/45R22 SL 110H BW AT
RHM	TIRE SPARE-LT265/70R17 C 112Q BW AT
RHO	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 19
RI8	TIRE ALL-265/65R18 SL 114S BW MT
RIA	ACCESSORY-FLOOR LINER - CONTOURED
RIB	ACCESSORY-FLOOR LINER - CONTOURED - 3RD ROW
RKX	TIRE ALL-P265/65R18 SL 112T BW ALS
RM7	WHEEL SPARE-17 X 8.0, J, STEEL, DESIGN 1
RN2	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 1
RO1	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 3
RO2	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 4
RPT	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 14
RQ9	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 1
RQA	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 2
RS7	WHEEL-17 X 6.5, J, ALUMINUM, DESIGN 1
RT4	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 1
RT5	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 1
RTH	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 3
RTL	WHEEL-20 X 9.0, J, ALUMINUM, DESIGN 1
RUF	WHEEL SPARE-17 X 7.5, J, STEEL, DESIGN 1
RVA	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 1
RVG	ACCESSORY-ADAPTER - TRAILER HARNESS
RVQ	ACCESSORY-ASSIST STEPS - TUBULAR - OVAL - BLACK
RVS	ACCESSORY-ASSIST STEPS - TUBULAR - ROUND - BLACK
RVX	ACCESSORY-BALL MOUNT - TRAILER HITCH
RW2	ACCESSORY-BED RAILS - BLACK
RW3	ACCESSORY-BED RAILS - CHROME

RW6	ACCESSORY-BED STORAGE BOX - FIXED FULL WIDTH - METAL
RWI	ACCESSORY-BODY SIDE MOLDINGS - CHROME
RWK	ACCESSORY-BODY SIDE MOLDINGS - PAINTED
RWS	ACCESSORY-FLOOR MATS - CARPET
RWU	ACCESSORY-CARGO AREA ORGANIZER - COLLAPSIBLE
RX1	ACCESSORY-WHEEL, WITH INSERTS - DESIGN 1
RXH	ACCESSORY-CENTER CAP - WHEEL - DESIGN 1
RXJ	ACCESSORY-CENTER CAP - WHEEL - DESIGN 2
RXN	ACCESSORY-WHEEL, WITH INSERTS - DESIGN 2
RXQ	ACCESSORY-CONVENIENCE NET - BED MOUNTED
RY7	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH 1
RYT	ACCESSORY-FIRST AID KIT
RZ9	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 1
RZB	ACCESSORY-GRILLES/GRILLE INSERT - ALTERNATE DESIGN 2
RZO	ACCESSORY-WHEEL - 20" - ALUMINUM - DESIGN 9
RZY	ACCESSORY-HARNESS - WIRING
S08	ACCESSORY-HIGHWAY SAFETY KIT
S0M	ACCESSORY-ILLUMINATED DOOR SILLS
S0P	ACCESSORY-INSERT - FLOOR CONSOLE
S0Y	ACCESSORY-LAMPS - CARGO AREA
S1V	ACCESSORY-HEADPHONES - RSE
S2B	WHEEL SPARE-17 X 7.0, J, ALUMINUM, DESIGN 1
S3X	ACCESSORY-LAMPS - FRONT ROOF MOUNTED - OFF-ROAD
S41	ACCESSORY-LINER - WHEEL HOUSE
S42	ACCESSORY-LOAD STOPS - UTILITY RACK

S44	ACCESSORY-LOCKING PIN - TRAILER HITCH
S47	ACCESSORY-LUG NUTS
S4O	ACCESSORY-MIRRORS - TRAILER EXTENSION - ALT FINISH
S4Z	ACCESSORY-MIRRORS - TRAILER EXTENSION
S55	ACCESSORY-FLOOR MATS - ALL WEATHER - ALT DESIGN
S5S	ACCESSORY-NUDGE BAR - TUBULAR
S6L	ACCESSORY-PROTECTOR - ROCKER PANEL
S6M	ACCESSORY-RADIO KIT - NAVIGATION
S6N	ACCESSORY-RECEIVER COVER - TRAILER HITCH
S6P	ACCESSORY-REMOTE START KIT
S6Q	ACCESSORY-ROADSIDE ASSISTANCE PACKAGE
S6V	ACCESSORY-ASSIST STEPS - RETRACTABLE
S6W	ACCESSORY-SEAT COVER - MUDDER (PROTECTIVE)
S9O	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 18
SAF	LOCK-SPARE TIRE, HOIST SHAFT
SAM	ACCESSORY-SKID PLATES
SAO	ACCESSORY-SMOKERS PACKAGE
SB1	ACCESSORY-SPLASH GUARDS - FLAT
SB7	ACCESSORY-DECAL PACKAGE - DESIGN 1
SB9	ACCESSORY-DECAL PACKAGE - DESIGN 2
SBY	ACCESSORY-SPORT BAR - BED MOUNTED - DESIGN 1
SCU	ACCESSORY-SPORT BAR - BED MOUNTED - DESIGN 2
SCZ	ACCESSORY-TAILGATE HANDLE - ALTERNATE FINISH - CHROME
SD5	ACCESSORY-TIRE PRESSURE MONITOR
SDA	ACCESSORY-TOW HOOKS
SDE	ACCESSORY-TRAILER HITCH - REMOVABLE
SDI	ACCESSORY-TRIANGLE - REFLECTIVE

SE4	ACCESSORY-WHEEL - 18" - ALUMINUM - DESIGN 1
SES	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 1
SEU	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 2
SEV	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 3
SEW	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 4
SEY	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 5
SEZ	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 6
SF0	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 7
SF1	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 8
SF5	ACCESSORY-WHEEL FLARES - ALTERNATE DESIGN - MOLDED COLOR
SF6	ACCESSORY-WHEEL FLARES - ALTERNATE DESIGN - PAINTED
SF8	ACCESSORY-DECAL PACKAGE - DESIGN 3
SFC	ACCESSORY-DECAL PACKAGE - DESIGN 6
SFE	ACCESSORY-WHEEL LOCKS
SFJ	ACCESSORY-WINDOW SHADES - REFLECTIVE
SFV	ACCESSORY-WIRELESS NETWORK INTERFACE MODULE
SFZ	ACCESSORY-EMBLEM - EXTERIOR - DESIGN 1
SG1	ACCESSORY-EMBLEM - EXTERIOR - DESIGN 2
SGF	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 4
SGG	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 5
SGM	ACCESSORY-WHEEL - 22 X 9.0 - J - ALUMINUM - DESIGN 9
SH0	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 7
SIE	ACCESSORY-PUBX TIERED STORAGE
SIF	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PACKAGE
SII	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 8

SIL	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PKG - W/INTEGRATED POWER
SIY	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 9
SJ9	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH 1
SJA	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH 2
SKD	VEHICLE-SEMI-KNOCKED DOWN
SKP	WHEEL SPARE-17 X 6.5, J, STEEL, DESIGN 1
SL7	ACCESSORY-PUBX LADDER / UTILITY RACK STANCHIONS
SLT	EQUIPMENT-'LT' SALES PKG
SMI	WHEEL-22 X 9.0, J, ALUMINUM, DESIGN 17
SNO	ACCESSORY-HITCH COMPLETION PKG - GOOSENECK
SPY	ACCESSORY-LUG NUTS - ALT FINISH
SPZ	ACCESSORY-WHEEL LOCKS - ALT FINISH
SRW	CHASSIS-SINGLE REAR WHEEL, RIDE & HANDLING
ST7	SALES PACKAGE-WT BLACK OUT PACKAGE
ST9	SALES PACKAGE-C/K 10
STF	SALES PACKAGE-ALL TERRAIN X
STH	SALES PACKAGE-RALLY 2
STJ	SALES PACKAGE-CUSTOM SPORT 2
SU2	SALES PACKAGE-RALLY 2 Z71
SXL	EQUIPMENT-SLX SALES PACKAGE
SYT	ACCESSORY-SILL PLATES - ALTERNATE FINISH
T2H	ORNAMENTATION-EXTR, EXPORT UNIQUE REQUIREMENTS
T3U	LAMP FRT FOG-FRT FOG
T4F	HEADLAMPS-HIGH INTENSITY DISCHARGE
T4L	HEADLAMPS-LED
T4Z	SHIFTER INTERLOCK-SEAT BELT ASSURANCE SYSTEM
T79	LAMP-FOG, RR

T89	LAMP-TAIL & STOP, EXPORT
T94	CONTROL, HEADLAMPS-LH RULE OF THE ROAD
TB4	BODY EQUIPMENT-LIFT GATE (MANUAL)
TB5	BODY EQUIPMENT-LIFT GATE (POWER)
TB8	CONTROL, HEADLAMPS-RH RULE OF THE ROAD
TBD	ORNAMENTATION-EXTR, BOWTIE
TBD	PROVISIONS-SIDE TOP CAP DELETE
TBD	WW-20 X 8.5, J, ALUMINUM (PYU)
TC2	BODY EQUIPMENT-LIFT GATE, POWER, HANDS FREE
TC7	GRILLE-RADIATOR, BODY COLOR SIDE, W/ CHROME TIPS
TCB	PLANT CODE-VALENCIA, VENEZUELA
TDM	MODE-TEEN DRIVER SETTINGS
TG5	PLAYER-COMPACT DISC AND MP3
TGG	LANGUAGE CONTROL-ENGLISH, ARABIC, FRENCH
TGK	COLOR COMBINATION-SOLID, SPECIAL PAINT
TL1	GRILLE-SPECIAL
TQ5	HEADLAMP HIGH BEAM-AUTO CONTROL
TR2	LAMP-TURN SIGNAL, ENLARGED
TRB	GRILLE-RADIATOR, BODY COLOR
TRW	PROVISIONS-LAMP, ROOF MOUNTED
TUF	ORNAMENTATION-EMBLEM, "TEXAS EDITION"
U01	LAMP-FIVE, ROOF MARKER, TRUCK
U19	SPEEDOMETER-INST, KILO & MILES, KILO ODOMETER
U2J	DIGITAL AUDIO SYSTEM-S-BAND - NONE
U2K	DIGITAL AUDIO SYSTEM-S-BAND
U2L	RECEPTION-HD
U42	ENTERTAINMENT PKG-RR SEAT, SINGLE DISP, REM CONTROL, RR CONSUMER PORT, 2-WIRELESS 2-CHANNEL HEADPHONES, OPTICAL DRIVE

U73	ANTENNA-FIXED, RADIO
U77	ANTENNA-RR WINDOW, RADIO
UB7	PERFORMANCE PACKAGE-HIGHER PAYLOAD
UD5	PARK ASSIST-FRONT AND REAR
UD7	PARK ASSIST-REAR
UDA	COMMUNICATION SYSTEM-VEHICLE, DEACTIVATED
UDC	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (ONE COLOR GRAPHIC)
UDD	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR STANDARD GRAPHIC)
UDV	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED, FULL CLUSTER (MULTI COLOR GRAPHIC)
UE0	COMMUNICATION SYSTEM-VEHICLE - NONE
UE1	COMMUNICATION SYSTEM-VEHICLE, ONSTAR
UE3	COMMUNICATION SYSTEM-VEHICLE, CHEVYSTAR
UEU	SENSOR INDICATOR-FORWARD COLLISION ALERT
UF2	LAMP-CARGO
UF3	SWITCH-HIGH IDLE
UFG	SENSOR INDICATOR-REAR CROSS TRAFFIC ALERT
UFL	LANE ACTIVE SAFETY-DEPARTURE WARNING
UG1	OPENER-GARAGE DOOR, UNIVERSAL
UGN	COLL IMMINENT BRK-ALL SPEED, VEH FWD MOVEMENT, BRAKE PREFILL, INTEGRATED BRAKE ASSIST
UHL	VEHICLE-U-HAUL
UHN	WHEEL-18 X 8.5, J, ALUMINUM, DESIGN 3
UHS	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR ENHANCED GRAPHIC)
UHX	LANE ACTIVE SAFETY-KEEP ASSIST
UHY	COLL IMMINENT BRK-LOW SPEED, VEH FWD MOVEMENT, BRAKE PREFILL, INTEGRATED BRAKE ASSIST

UI3	COMMUNICATION SYSTEM-VEHICLE, ERA GLONASS
UIC	ACCESSORY-ACCY COMBINATION PKG 1
UJ5	ACCESSORY-DVD ENTERTAINMENT SYSTEM - HEADREST - DUAL
UJM	TIRE PRESS INDICATOR-MANUAL LEARN
UK3	CONTROL-STEERING WHEEL, ACCESSORY
UKC	SIDE ACTIVE SAFETY-OBSTACLE DETECTION ENHANCED
UKG	PARK ASSIST-FRONT, REAR, LATERAL-FRONT (SEMIAUTOMATIC STEERING & BRAKING ADVANCED PARKING AID)
UL2	FREQUENCIES-EUROPEAN
UL4	FREQUENCIES-SOUTH AMERICA
UL8	FREQUENCIES-SAUDI ARABIAN
ULK	ACCESSORY-TOW HOOKS - RED
ULT	APPEARANCE PACKAGE-CADILLAC ESCALADE, PLATINUM
UMN	SPEEDOMETER-INST, MILES & KILO, MILES ODOMETER
UPF	WIRELESS INTERFACE-SHORT RANGE, VOICE REC
UQ3	SPEAKER SYSTEM-ENHANCED AUDIO
UQ5	SPEAKER SYSTEM-4, DUAL FRT DR MTD, DUAL EXTD RGE QTR MNTD
UQA	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH AMPLIFIER
UQG	SPEAKER SYSTEM-ENHANCED AUDIO WITH AMPLIFIER
UQH	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH SURROUND AMPLIFIER, AUDIOPHILE
UQS	SPEAKER SYSTEM-PREMIUM AUDIO BRANDED WITH SURROUND AMPLIFIER
UTJ	THEFT DETERENT-ELECTRICAL, UNAUTHORIZED ENTRY
UTM	THEFT DETERENT SYS-UNAUTHORIZED ENTRY, W/O REMOTE KEYLESS ENTRY
UTR	ALARM, HORN-CONTENT THEFT DETERENT, SELF POWERED
UTT	THEFT DETERENT-BODY SECURITY CONTENT

UTU	SENSOR, VEHICLE-INCLINATION
UTV	SENSOR, VEHICLE-INTERIOR MOVEMENT
UV6	DISPLAY-HEAD UP
UVC	VISION-REAR VIEW, MONO, ANALOG
UVD	STEERING WHEEL HEAT-MANUAL
UVH	VISION-360 VIEW, MONO, ANALOG
UVZ	SENSOR-COLLISION AVOIDANCE & MITIGATION, VEHICLE REVERSE MOVEMENT
UY2	WIRING PROVISIONS-CAMPER & 5TH WHEEL TRAILER
V10	PROVISION OPTIONS-COLD WEATHER
V22	GRILLE-RADIATOR, CHROME
V3Q	BAR-PUBX BRIDGE
V46	BUMPER FRT-CHROME
V54	LUGGAGE CARRIER-ROOF, PAINTED
V76	HOOK-TOW
V78	VEHICLE STATEMENT-(NONE)
V8C	VEHICLE STATEMENT-MEXICO
V8I	VEHICLE STATEMENT-ISRAEL
V8Y	VEHICLE STATEMENT-KOREA-FTA
VAT	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH - CHROME
VAV	ACCESSORY-FLOOR MATS - ALL WEATHER
VB5	BUMPER FRT-COLOR
VBJ	ACCESSORY-UNDERSEAT STORAGE
VBN	ACCESSORY-PUBX CARPET
VBR	ACCESSORY-PUBX RUBBER MAT
VBX	LANGUAGE LABEL-ARABIC
VC5	LABEL-SHIPPING, EXCEPT US, US POSSESSIONS, OR JAPAN (DO NOT USE MY18 AND BEYOND)
VFF	VIDEO FORMAT-REGION 1, NTSC
VFJ	VIDEO FORMAT-REGION 2, PAL
VFK	VIDEO FORMAT-REGION 3, NTSC

VFM	VIDEO FORMAT-REGION 4, NTSC
VGC	PROTECTOR-FILM, PAINT ETCH PREVENTIVE
VH6	BUMPER FRT-BLACK
VH9	ENVELOPE-OWNER INFO MAN
VHM	PROGNOSTIC SYSTEM-VEHICLE HEALTH MANAGEMENT
VJG	BUMPER RR-BLACK
VJH	BUMPER RR-CHROME
VK3	LICENSE PLATE FRONT-FRT MOUNTING PKG
VKU	ACCESSORY-MIRROR CAPS - CHROME
VKW	ACCESSORY-ORGANIZER - FRONT CONSOLE
VKY	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH - CHROME
VL4	LICENSE PLATE FRONT-FRT MOUNTING PKG, EEC
VL5	LICENSE PLATE-RR MOUNTING PKG, EXPORT
VLG	ACCESSORY-CLOSEOUT - REAR FASCIA
VLI	ACCESSORY-MAT - TRUNK / CARGO AREA
VLQ	HOOK-TOW, CHROME
VNX	GRILLE-NONE
VPB	ACCESSORY-TONNEAU - RR COMPT - VINYL W/ INTEGRAL CROSSBOW SUPPORTS
VPH	VEHICLE PREPARATION-OVERSEAS DELIVERY
VPV	HANDLING CHARGE-ARLINGTON ASM TO KERR INDUSTRIES, ARLINGTON, TX AND RETURN TO ARLINGTON ASM
VPZ	GRILLE-RADIATOR, SPECIAL, CHROME
VQK	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED
VQL	ACCESSORY-FUEL DOOR - DESIGN 1
VQQ	ACCESSORY-CROSS RAILS - ROOF RACK - INTEGRATED - BLACK
VQT	ACCESSORY-TONNEAU - RR COMPT - HARD FOLDING
VQY	ACCESSORY-TOW HOOKS - CHROME
VQZ	ACCESSORY-EXHAUST TIP - DESIGN 1

VRS	ACCESSORY-CARGO SECURITY SHADE
VRV	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED - PAINTED
VT5	BUMPER RR-COLOR KEYED
VT7	OWNERS MANUAL-ENGLISH LANGUAGE
VTB	ACCESSORY-PROTECTOR - REAR BUMPER
VTG	ACCESSORY-INTERIOR TRIM KIT
VUK	ACCESSORY-TAILGATE LINER - PUBX
VV4	COMMUNICATION EQUIP-MOBILE INTERNET CONNECTIVITY
VVJ	CALIBRATION-SPEEDOMETER (180 KPH/112 MPH)
VW9	ACCESSORY-CENTER CAP - WHEEL - DESIGN 3
VWT	ACCESSORY-GRILLE SCREEN - INSECT PROTECTION
VXE	CAP-BOX RAIL DELETE
VXH	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - OVAL
VXJ	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - ROUND
VXT	VEHICLE TYPE-INCOMPLETE
VYU	PROVISIONS-SNOW PLOW PREP
VYW	ACCESSORY-FLOOR MATS - PREMIUM CARPET - DESIGN 1
VZ3	LABEL-MERCURY DISPOSAL NOTIFICATION
VZX	ACCESSORY-PUBX BEDLINER
W2D	ACCESSORY-CARGO NET
W88	ACCESSORY-SPLASH GUARDS - OVERSIZED
WBC	ACCESSORY-EXHAUST UPGRADE - DUAL MODE
WEA	APPEARANCE PACKAGE-Z71 PLUS
WH9	ACCESSORY-CARGO AREA DIVIDER - VERTICAL
WJI	SALES PACKAGE-MARY KAY
WJP	SALES PACKAGE-MIDNIGHT EDITION
WMH	VIN MODEL YEAR-2017

WPK	SALES PACKAGE-SPORT PACK
WV9	MERCHANDISED PKG-VALUE LEADER
X88	MARKET BRAND-CHEVROLET
XAA	ACCESSORY-TIRE ALL-P275/55R20 SL 111S BW AL2 VAR 1
XAC	ACCESSORY-TIRE ALL-P275/55R20 SL 111S BW AT VAR 1
XAH	ACCESSORY-TIRE ALL-P285/45R22 SL 110H BW AT -VAR 1
XAV	ACCESSORY-TIRE ALL - P285/45R22 SL 110H BW AL3 -VAR 1
XL7	FREQUENCIES RATING-315 MHZ, LONG DISTANCE
XL8	FREQUENCIES RATING-433 MHZ
Y65	SALES PACKAGE-ESS 1
Y66	SALES PACKAGE-ESS 2
Y86	SALES PACKAGE-ESS 1B
Y91	MERCHANDISED PKG-LUXURY EDITION
YE9	PACKAGE, CONVENIENCE-COMFORT & DECOR LEVEL #3
YF5	CERTIFICATION-EMISSION, CALIFORNIA
YM8	IDENTIFICATION-LIMITED PERSONALIZATION OPTION (LPO)
Z49	COUNTRY-CANADA
Z56	CHASSIS PACKAGE-POLICE CONVERSION
Z5X	MIRROR PROVISIONS-ARABIC LANGUAGE
Z60	CHASSIS PACKAGE-HIGH PERFORMANCE
Z6A	PROVISIONS-SPECIAL EQUIPMENT, 5TH WHEEL/ GOOSENECK TRAILER HITCH PREP PACKAGE
Z71	CHASSIS PACKAGE-"OFF ROAD"
Z75	MARKET BRAND-CADILLAC
Z82	TRAILER PROVISIONS-SPECIAL EQUIPMENT, H.D.
Z85	CHASSIS PACKAGE-INCREASED CAPACITY
Z88	MARKET BRAND-GMC
Z95	CHASSIS PACKAGE-MAGNERIDE

ZAK	TIRE SPARE-P265/60R17 SL 108V BW AL3
ZBL	TIRE SPARE-P265/70R17 SL 113 H BW OOR
ZBZ	TIRE SPARE-P255/70R17 SL 110H BW ALS
ZHQ	TIRE SPARE-LT245/75R17 E 121/118 R BW ALS
ZQO	TIRE SPARE-LT235/80R17 E 120/117 Q BW ALS
ZW7	CHASSIS PACKAGE-PREMIUM SMOOTH RIDE
ZW9	BODY EQUIPMENT-BASE BODY OR CHASSIS
ZWF	TIRE SPARE-LT265/70R18 E 124/121 S BW ALS
ZXT	TIRE SPARE-LT265/70R17/E BW TL
ZXU	TIRE SPARE-LT265/70R17 E 121/118 S BW AT
ZY1	COLOR COMBINATION-SOLID
ZYD	SALES PACKAGE-HIGH DESERT
ZZT	TIRE SPARE-LT235/80R17 E 120/117 Q BW AT

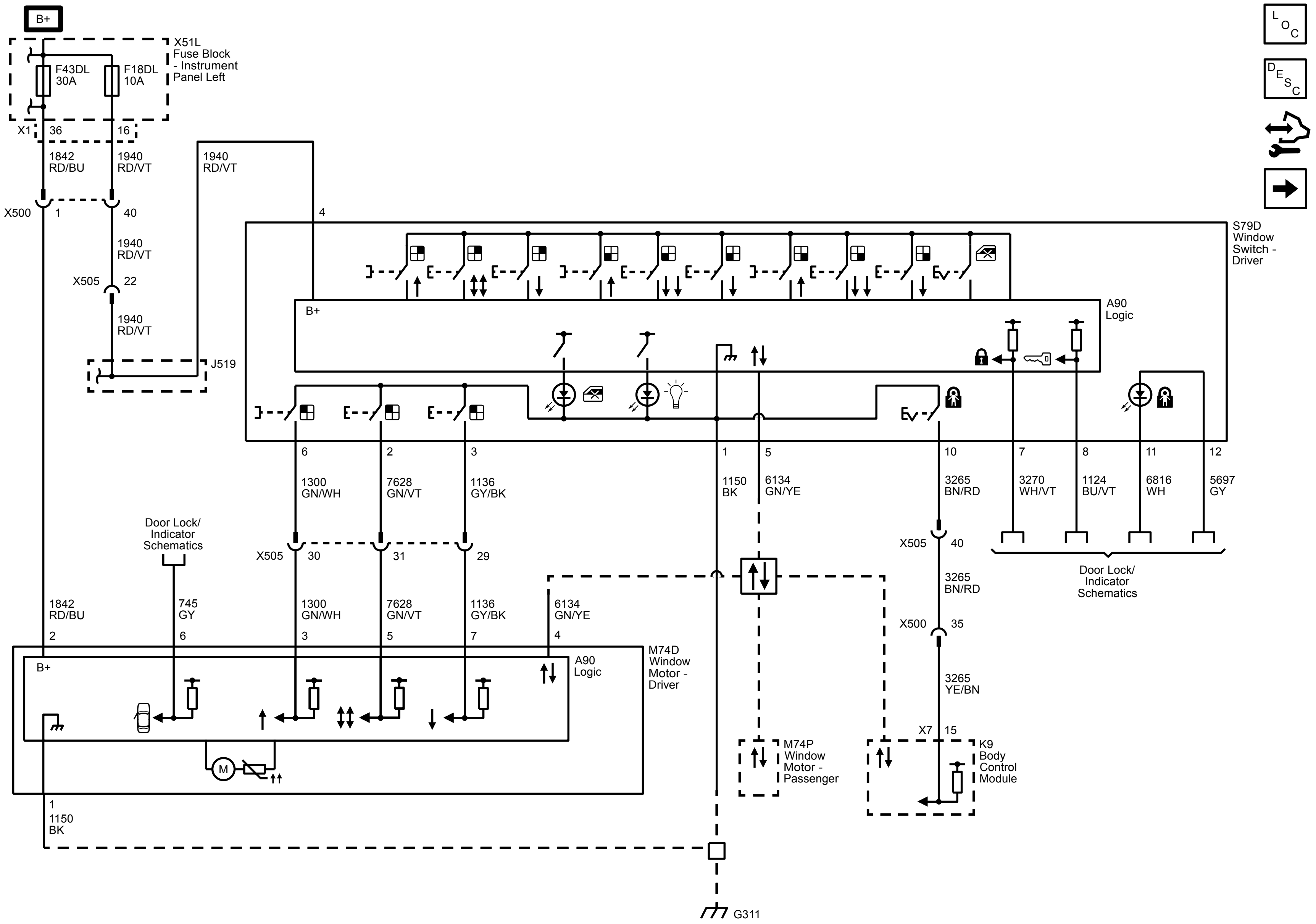
Body Systems

Fixed and Moveable Windows

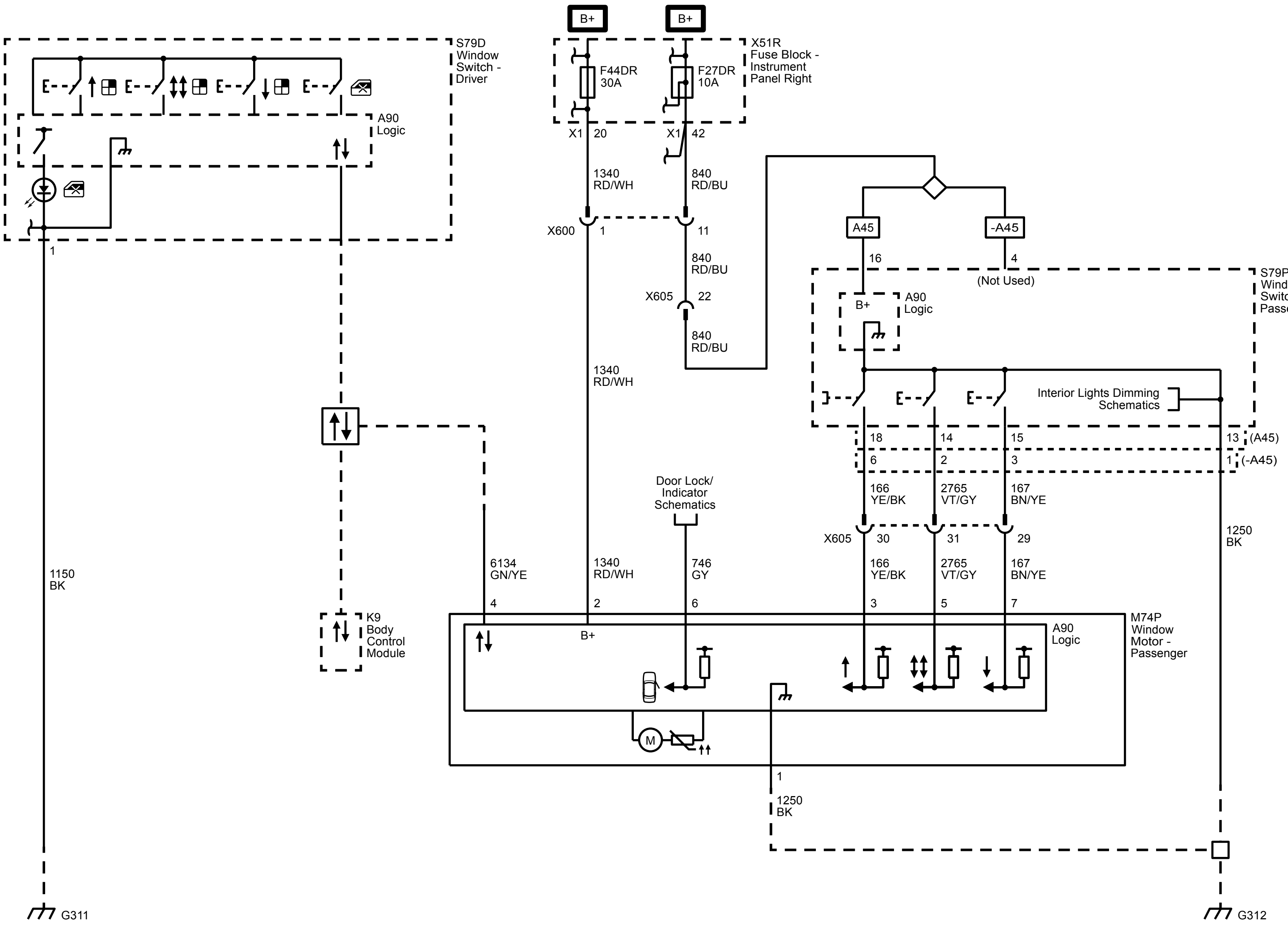
Schematic and Routing Diagrams

Moveable Window Schematics

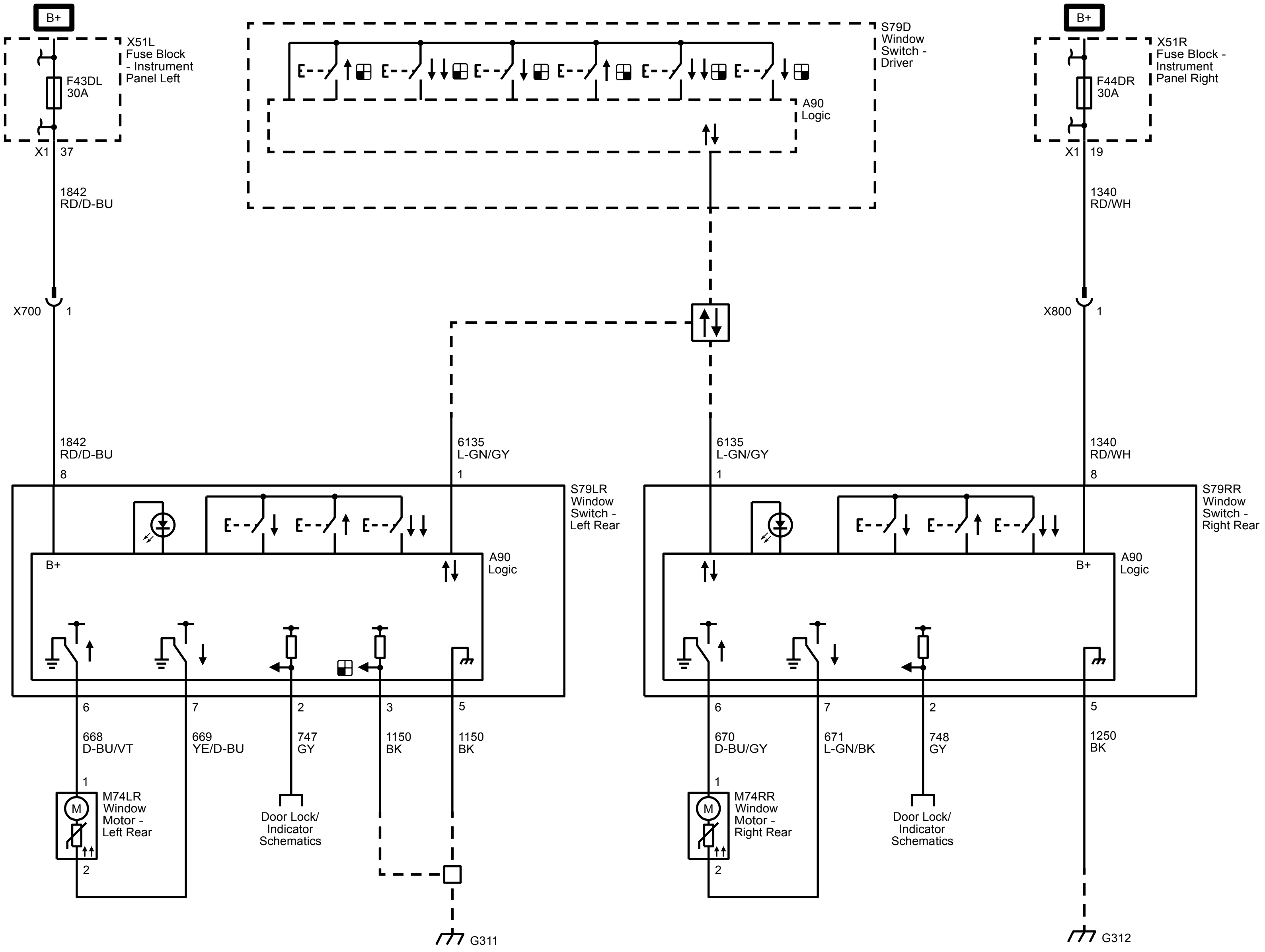
Driver


B+
X51L
Fuse Block
- Instrument
Panel Left
F43DL
30A
F18DL
10A
X1
36
16
1842
RD/BU
1940
RD/VT
1940
RD/VT
X500
1
40
4
1940
RD/VT
X505
22
1940
RD/VT
J519
S79D
Window
Switch -
Driver
B+
A90
Logic
6
2
3
1
5
10
7
8
11
12
1300
GN/WH
7628
GN/VT
1136
GY/BK
1150
BK
6134
GN/YE
3265
BN/RD
3270
WH/VT
1124
BU/VT
6816
WH
5697
GY
Door Lock/
Indicator
Schematics
X505
30
31
29
X505
40
3265
BN/RD
Door Lock/
Indicator
Schematics
X500
35
1842
RD/BU
2
745
GY
6
1300
GN/WH
3
7628
GN/VT
5
1136
GY/BK
7
6134
GN/YE
4
A90
Logic
M74D
Window
Motor -
Driver
B+
M
3265
YE/BN
X7
15
M74P
Window
Motor -
Passenger
K9
Body
Control
Module
1
1150
BK
G311
L O C
D E S C

Passenger

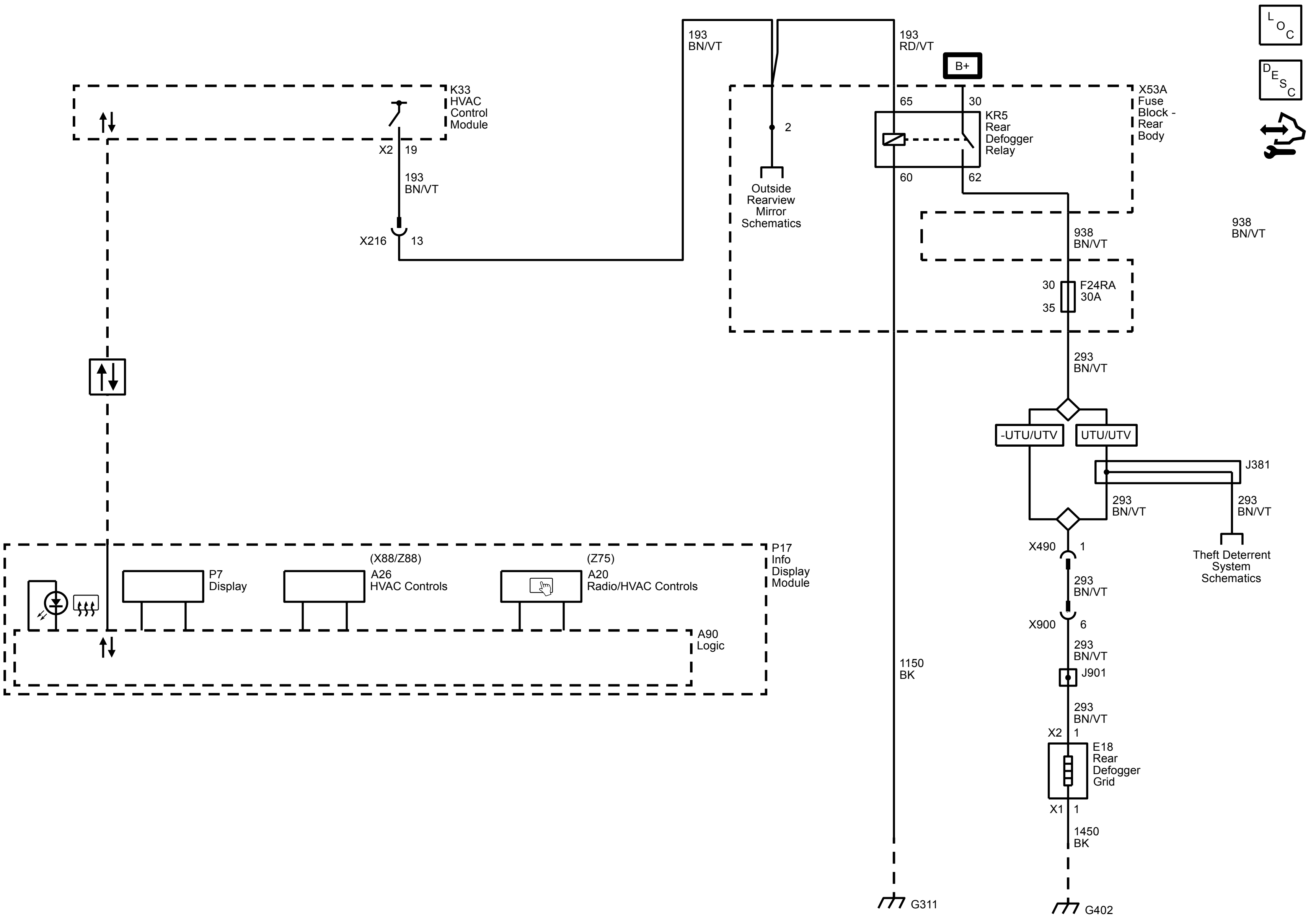

B+
B+
S79D Window Switch - Driver
A90 Logic
1
1150 BK
G311
F44DR 30A
F27DR 10A
X51R Fuse Block - Instrument Panel Right
X1 20
X1 42
1340 RD/WH
840 RD/BU
X600
1
11
840 RD/BU
X605
22
840 RD/BU
1340 RD/WH
A45
-A45
16
4
(Not Used)
S79P Window Switch - Passenger
A90 Logic
B+
Interior Lights Dimming Schematics
18
14
15
13 (A45)
6
2
3
1 (-A45)
166 YE/BK
2765 VT/GY
167 BN/YE
1250 BK
X605
30
31
29
166 YE/BK
2765 VT/GY
167 BN/YE
Door Lock/ Indicator Schematics
6134 GN/YE
1340 RD/WH
746 GY
K9 Body Control Module
4
2
6
3
5
7
B+
A90 Logic
M74P Window Motor - Passenger
M
1
1250 BK
G312

Rear Doors


B+
X51L
Fuse Block
- Instrument
Panel Left
F43DL
30A
X1 37
1842
RD/D-BU
X700 1
S79D
Window
Switch -
Driver
A90
Logic
B+
X51R
Fuse Block -
Instrument
Panel Right
F44DR
30A
X1 19
1340
RD/WH
X800 1
1842
RD/D-BU
8
6135
L-GN/GY
1
S79LR
Window
Switch -
Left Rear
B+
A90
Logic
6
7
2
3
5
668
D-BU/VT
669
YE/D-BU
747
GY
1150
BK
1150
BK
1
M74LR
Window
Motor -
Left Rear
2
Door Lock/
Indicator
Schematics
G311
6135
L-GN/GY
1
1340
RD/WH
8
S79RR
Window
Switch -
Right Rear
B+
A90
Logic
6
7
2
5
670
D-BU/GY
671
L-GN/BK
748
GY
1250
BK
1
M74RR
Window
Motor -
Right Rear
2
Door Lock/
Indicator
Schematics
G312

Defogger Schematics

Defogger


193
BN/VT
193
RD/VT
B+
L O C
D E S C
K33
HVAC
Control
Module
X2
19
193
BN/VT
X216
13
2
Outside
Rearview
Mirror
Schematics
65
30
KR5
Rear
Defogger
Relay
60
62
X53A
Fuse
Block -
Rear
Body
938
BN/VT
938
BN/VT
30
35
F24RA
30A
293
BN/VT
-UTU/UTV
UTU/UTV
J381
293
BN/VT
293
BN/VT
Theft Deterrent
System
Schematics
X490
1
293
BN/VT
X900
6
293
BN/VT
J901
293
BN/VT
X2
1
E18
Rear
Defogger
Grid
X1
1
1450
BK
G402
1150
BK
G311
P17
Info
Display
Module
P7
Display
(X88/Z88)
A26
HVAC Controls
(Z75)
A20
Radio/HVAC Controls
A90
Logic

Description and Operation

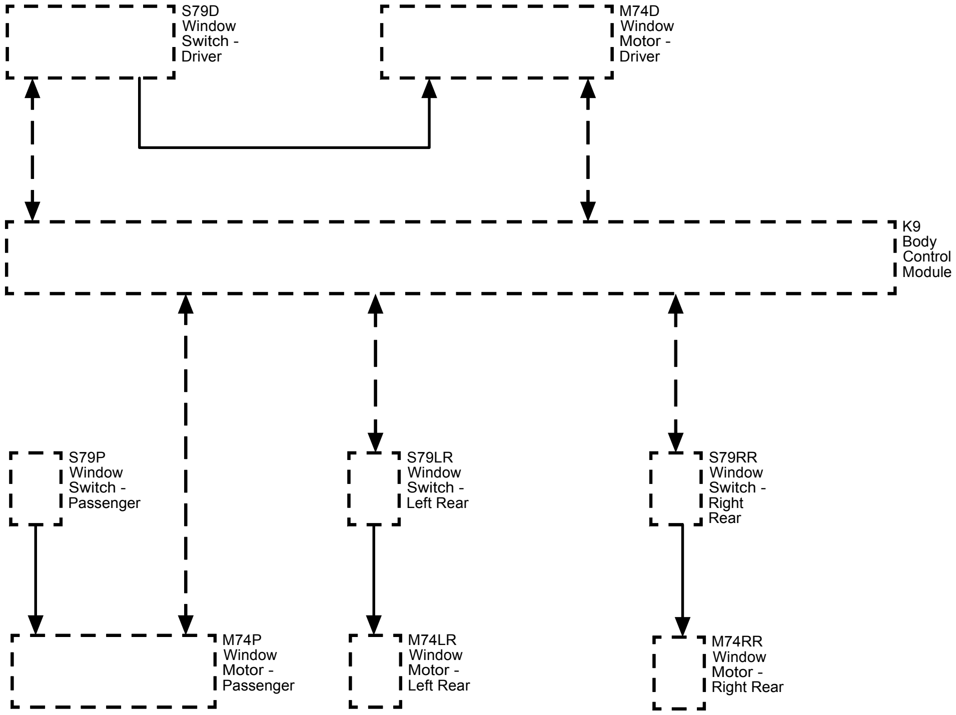
Power Windows Description and Operation

Power Windows System Components

The power window system consists of the following components:

- Driver window switch
- Passenger window switch
- Left rear window switch
- Right rear window switch
- Window motors in each of the doors
- 30A Fuse
- 5A Fuse
- 30A Fuse
- Body control module (BCM)

14 Power Windows AXG-AEF-AEQ Block Diagram


S79D Window Switch - Driver
M74D Window Motor - Driver
K9 Body Control Module
S79P Window Switch - Passenger
S79LR Window Switch - Left Rear
S79RR Window Switch - Right Rear
M74P Window Motor - Passenger
M74LR Window Motor - Left Rear
M74RR Window Motor - Right Rear

Driver and Passenger Express Up and Express Down Power Window Motors

The driver and passenger doors contains a window motor is smart motor that will detect excessive resistance while performing the express up function and automatically reverse direction to prevent injury to any occupants that may become trapped between the closing window and the door frame. The automatic reverse safety feature can be overridden by pulling and holding the window switch.

The logic circuit within the window motor monitors the up, down and express signal circuits which are normally equal to B+ voltage. When a switch is used on the window switch, the contacts close causing a voltage drop within the appropriate signal circuit. The window motor will detect the voltage drop and will command the window to move in the direction requested.

The driver window switch communicates to the BCM by a serial data circuit. When the driver wishes to control the passenger window, the driver will use the appropriate switch on the driver window switch. When this switch is used, a serial data message is sent to the BCM requesting the passenger window motor command, the BCM will then send a serial data message to the passenger window motor which will then move in the direction requested.

Left Rear, Right Rear Express Down Window Motors

For the right rear and left rear doors, when their window switch is pressed in the down position, battery positive voltage is applied to their respective window motor control circuit and ground to the other window motor control circuit causing that window to open. When the individual window switch is pulled in the up position, voltage and ground is applied to the window motor in the opposite direction causing that window to close. The return path to ground is supplied through the inactive control circuit being normally grounded through the window switch.

Each rear window switch communicates to the BCM by a serial data circuit. When the driver wishes to control the left rear or right rear window, the driver will use the appropriate switch on the driver window switch. When this switch is used, a serial data message is sent to the BCM requesting a window motor command, the BCM will then send a serial data message to the appropriate rear door window switch which will then command that window to move in the direction requested.

Lockout Switch Feature

The driver power window switch contains a window lockout switch, when the driver presses the window lockout switch, a serial data message is sent to the BCM which will send a disable command to the rear window switches, deactivating them. The rear windows will still function normally from the switches on the driver window switch.

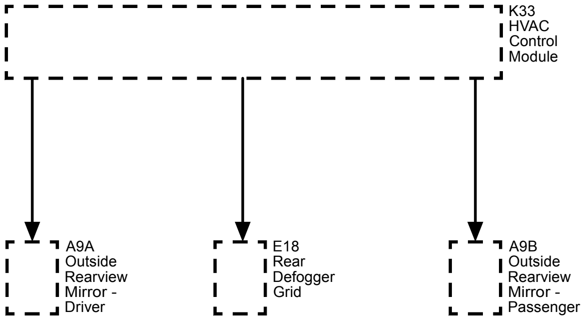
Rear Window Defogger Description and Operation

Rear Window Defogger System Components

The rear window defogger system consists of the following components:

- HVAC control module
- Rear defogger relay
- Rear defogger grid
- 40A fuse

Rear Window Defogger Block Diagram



Rear Window Defogger Operation

The rear defog control system utilizes a single zone backlight design, driven with a single relay configuration. Additionally, up to two outside rear view mirrors can be heated if equipped. A switch for the customer to control the system is provided within the HVAC control module, also included in the HVAC control module is an indicator to inform the customer with the current state of the system. The system is only operational when engine is running or during remote start.

Pressing the heated rear window switch on the HVAC control module causes the HVAC control module to provide voltage to the coil side of the rear defogger relay, this will energize the relay causing the relay switch contacts to close allowing B+ voltage to flow through the rear defogger grid control circuit to the rear defogger grid.

When the rear heated window switch is pressed and the engine is running, the rear defog control system will remain active for 10 minutes. After the initial cycle has lapsed, pressing the switch again will continue rear window defogger operation, but the cycle will only last 5 minutes.

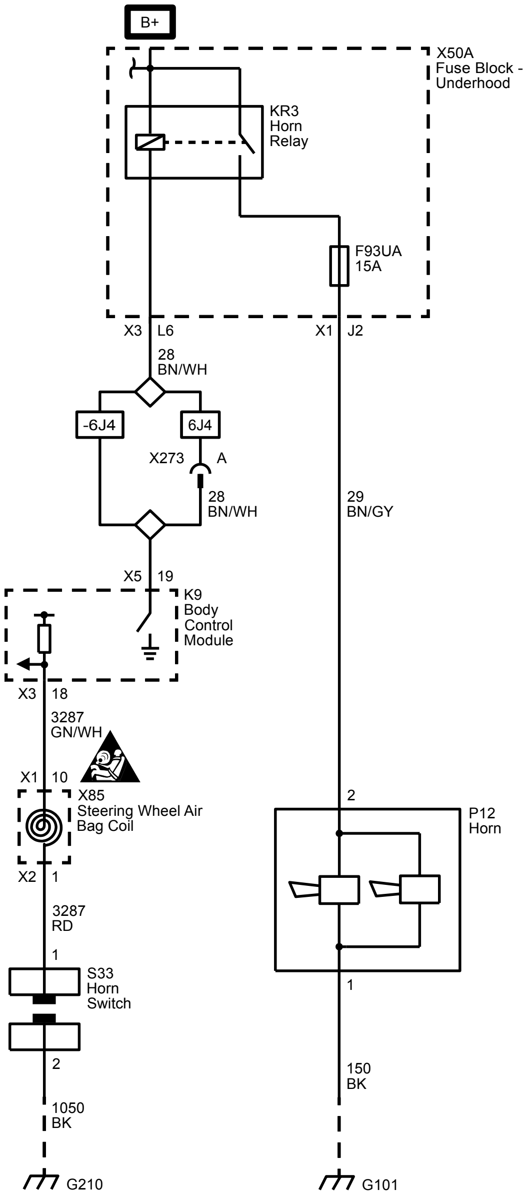
Body Systems

Horns and Pedestrian Alerts

Schematic and Routing Diagrams

Horn Schematics

Horn


B+
X50A
Fuse Block -
Underhood
KR3
Horn
Relay
F93UA
15A
X3
L6
X1
J2
28
BN/WH
-6J4
6J4
X273
A
28
BN/WH
29
BN/GY
X5
19
K9
Body
Control
Module
X3
18
3287
GN/WH
X1
10
X85
Steering Wheel Air
Bag Coil
X2
1
3287
RD
1
S33
Horn
Switch
2
1050
BK
G210
2
P12
Horn
1
150
BK
G101

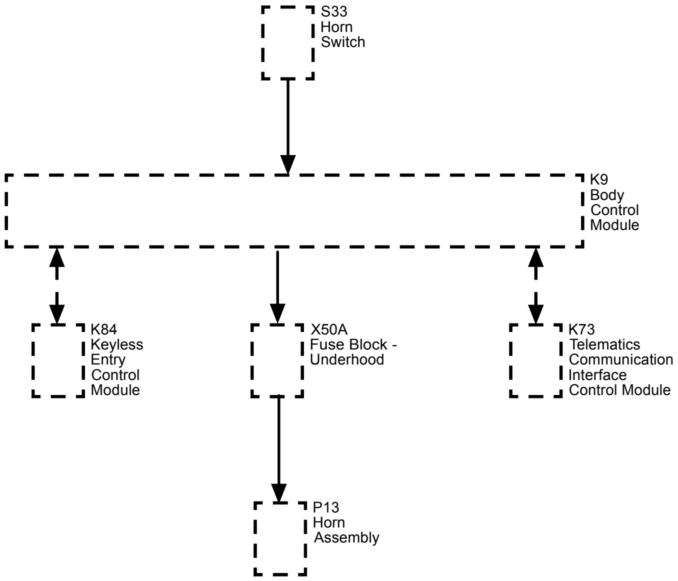
Description and Operation

Horns System Description and Operation

System Description

The horn system consists of the following components:

- HORN fuse
- Horn relay
- Horn switch
- Horn assembly
- Body control module (BCM)



S33 Horn Switch
K9 Body Control Module
K84 Keyless Entry Control Module
X50A Fuse Block - Underhood
K73 Telematics Communication Interface Control Module
P13 Horn Assembly

System Operation

The vehicle horn system is activated under the following conditions:

- When the horn switch is depressed
- The BCM commands the horns ON under any of the following conditions:
  - When the content theft deterrent system detects a vehicle intrusion—For further information refer to Theft Systems Description and Operation.
  - When the panic button is depressed on the remote control door lock transmitter—For further information refer to Keyless Entry System Description and Operation (With ATH)Keyless Entry System Description and Operation (Without ATH).
  - When the keyless entry system is used to lock the vehicle, a horn chirp may sound to notify the driver that the vehicle has been locked. The notification feature may be enabled or disabled through personalization. For further information refer to Keyless Entry System Description and Operation (With ATH)Keyless Entry System Description and Operation (Without ATH).
  - When the OnStar® system is used to sound the horns if equipped—For further information, refer to OnStar Description and Operation (UE1)OnStar Description and Operation (UI3).

Circuit Operation

Battery positive voltage is applied at all times to the horn relay coil and the horn relay switch. Pressing either of the horn switches applies ground to the horn relay control circuit. The BCM may also apply ground to the horn relay control circuit as described above. When the horn relay control circuit is grounded, the horn relay is energized and battery positive voltage is applied to the horns through the horn control circuit. The horns sound as long as ground is applied to the horn relay control circuit.

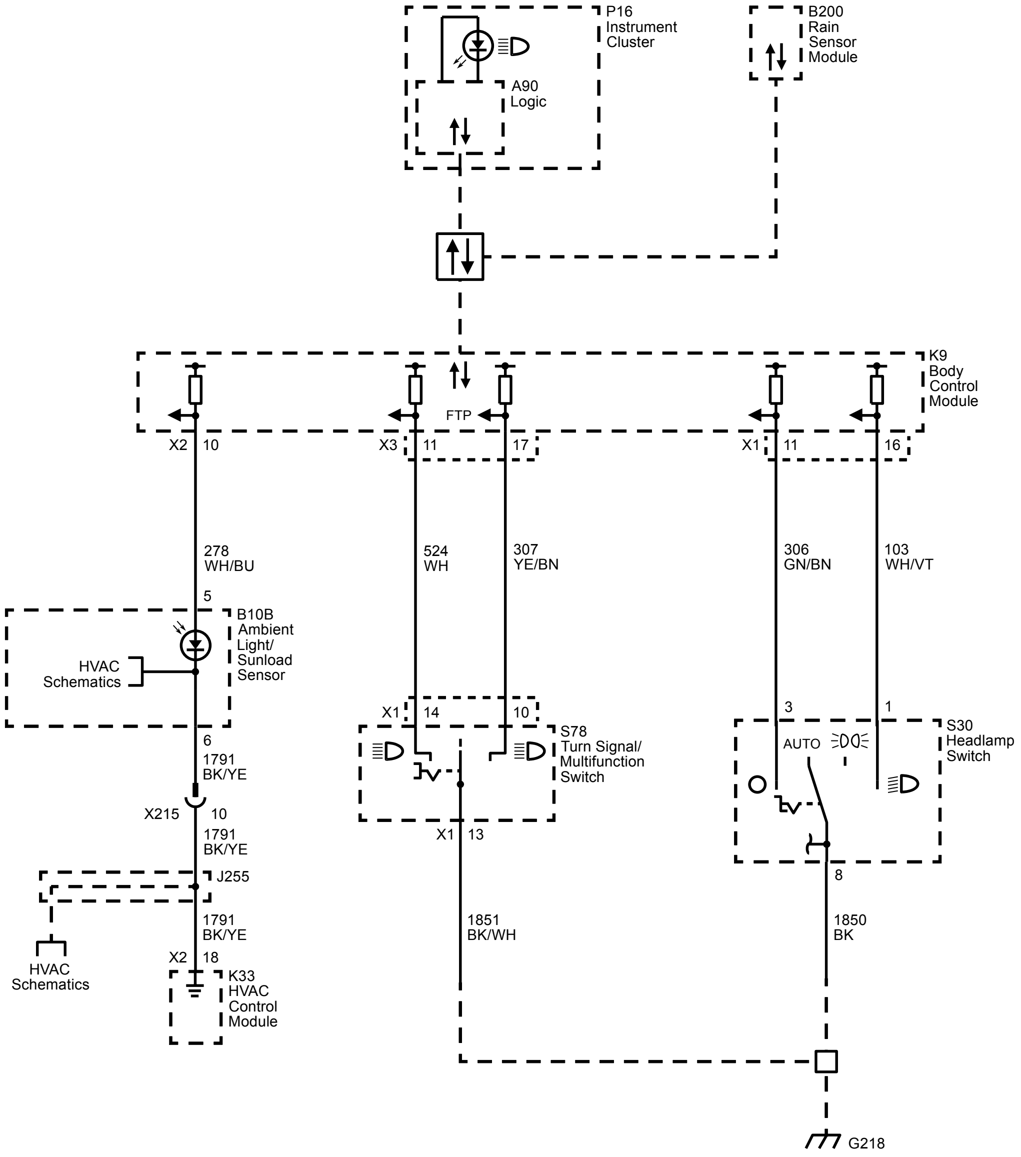
Body Systems

Lighting

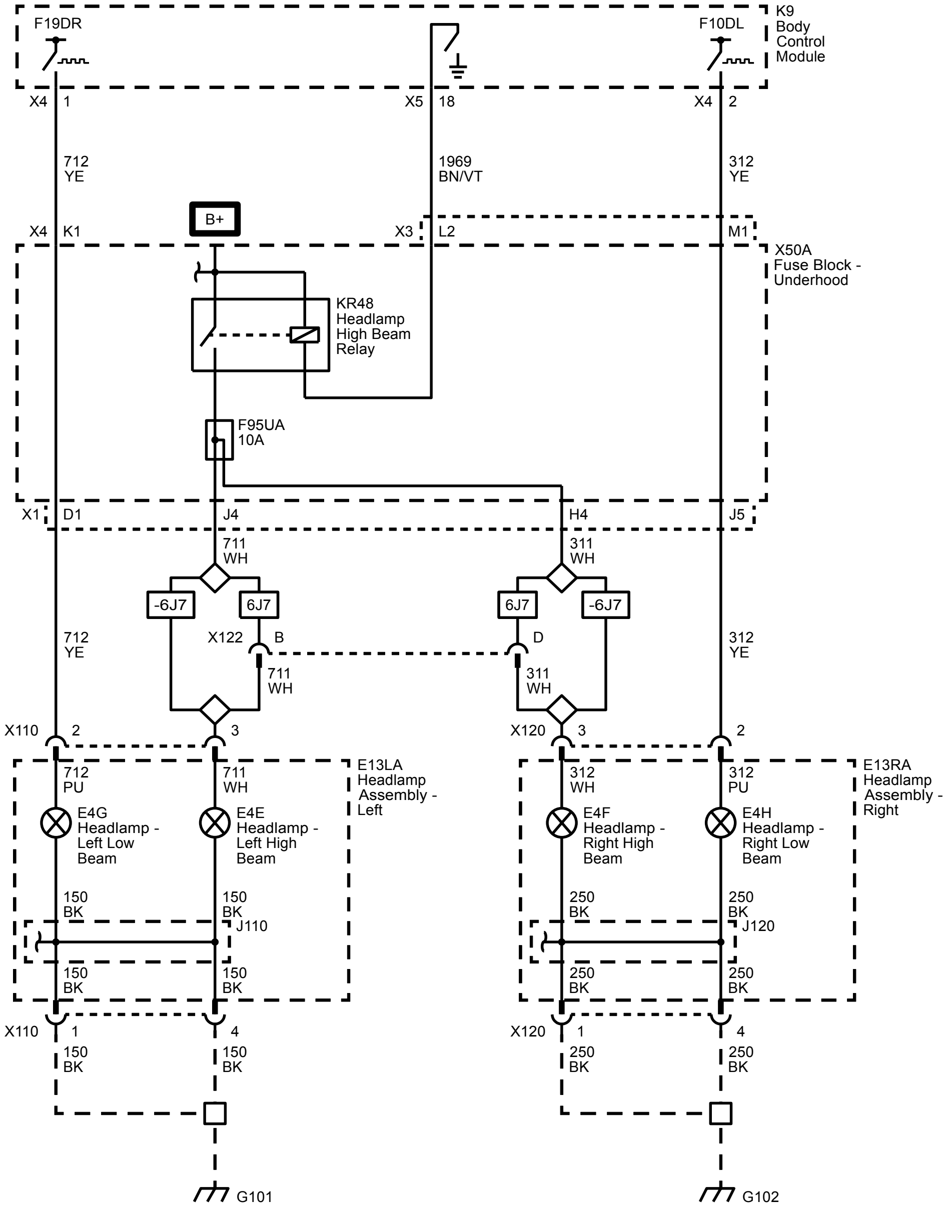
Schematic and Routing Diagrams

Headlights/Daytime Running Lights (DRL) Schematics (X88 or Z88)

Controls and Indicator

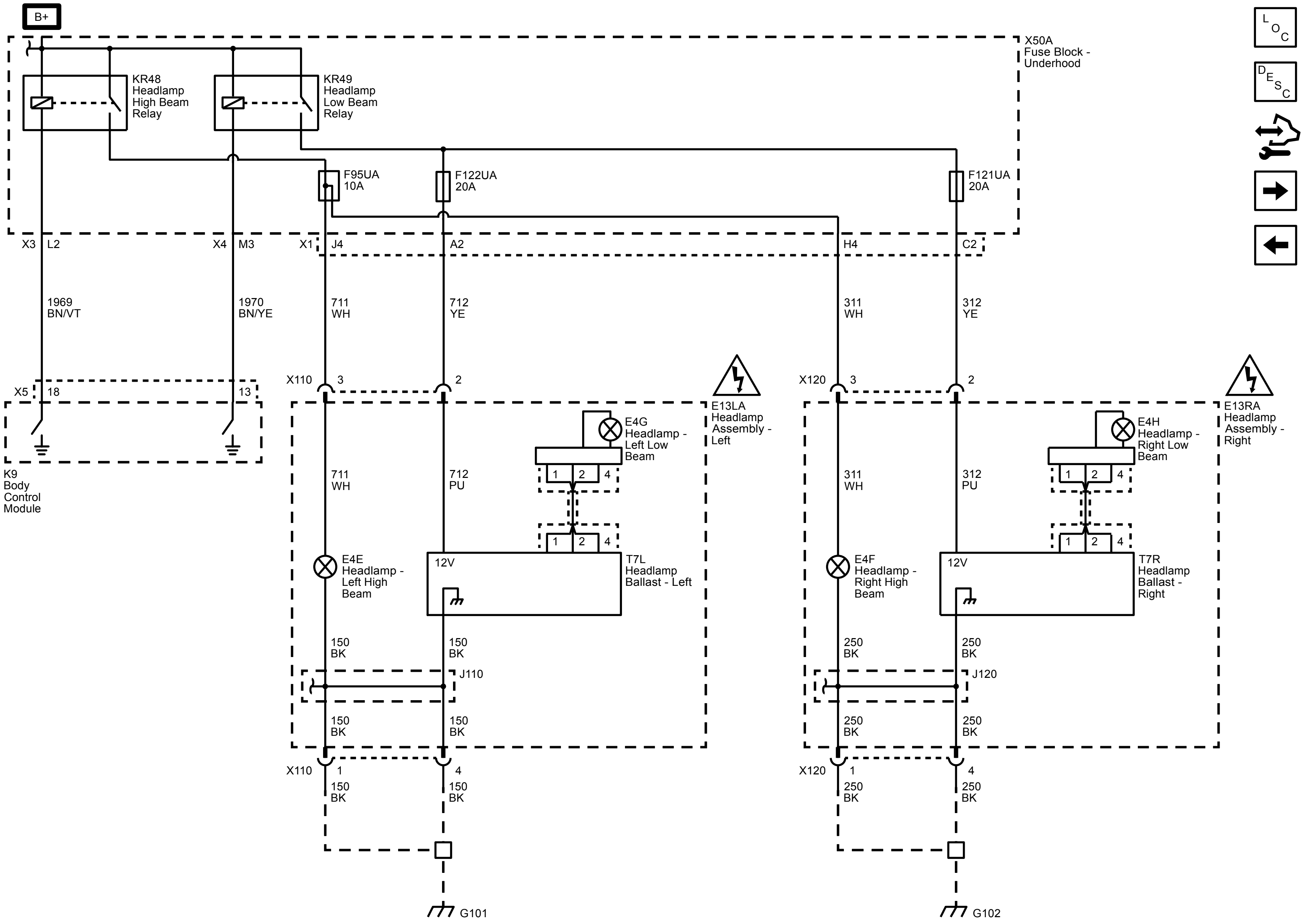

P16
Instrument
Cluster
A90
Logic
B200
Rain
Sensor
Module
K9
Body
Control
Module
FTP
X2
10
X3
11
17
X1
11
16
278
WH/BU
524
WH
307
YE/BN
306
GN/BN
103
WH/VT
5
B10B
Ambient
Light/
Sunload
Sensor
HVAC
Schematics
6
1791
BK/YE
X215
10
1791
BK/YE
J255
1791
BK/YE
HVAC
Schematics
X2
18
K33
HVAC
Control
Module
X1
14
10
S78
Turn Signal/
Multifunction
Switch
X1
13
1851
BK/WH
3
1
S30
Headlamp
Switch
AUTO
8
1850
BK
G218

Halogen (without T4F)

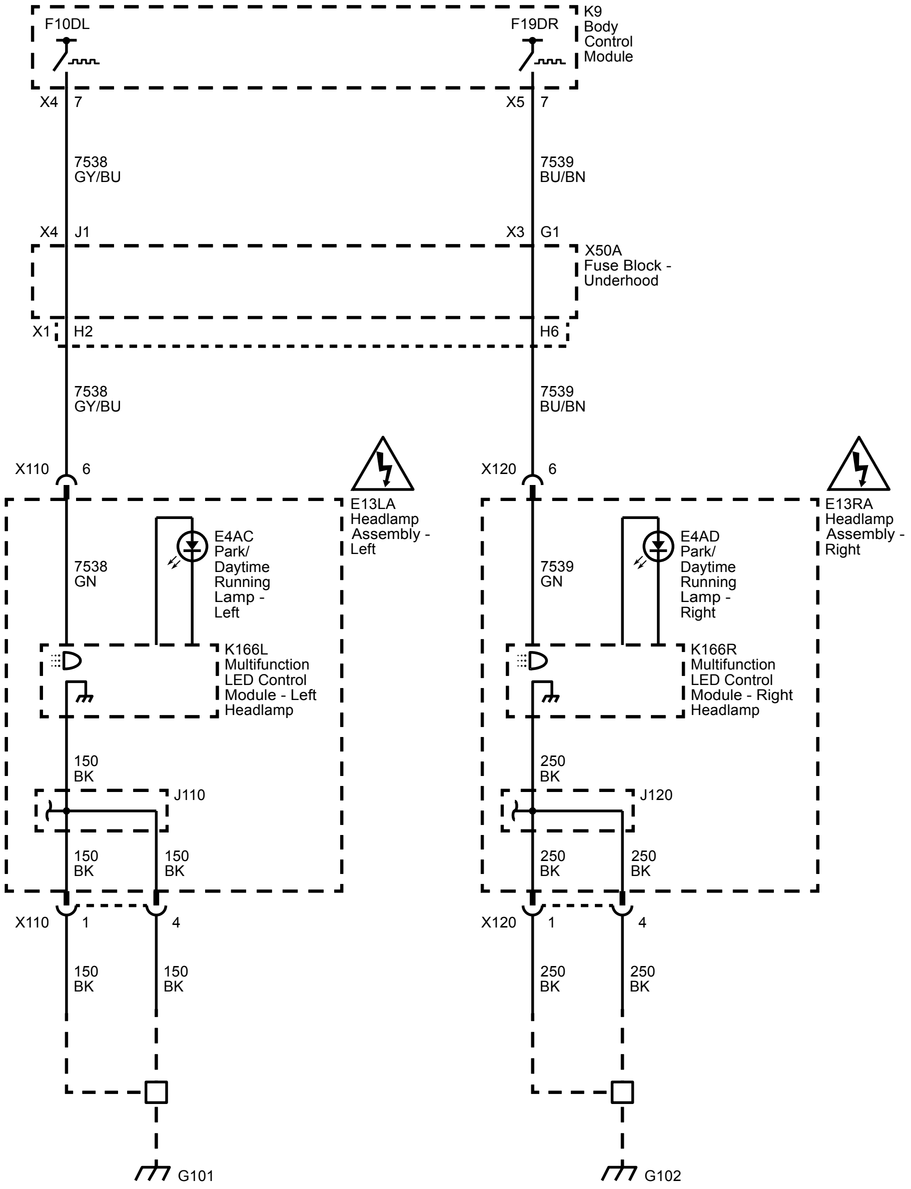

F19DR
F10DL
K9
Body
Control
Module
X4
1
X5
18
X4
2
712
YE
1969
BN/VT
312
YE
B+
X4
K1
X3
L2
M1
X50A
Fuse Block -
Underhood
KR48
Headlamp
High Beam
Relay
F95UA
10A
X1
D1
J4
H4
J5
711
WH
311
WH
-6J7
6J7
6J7
-6J7
712
YE
X122
B
D
312
YE
711
WH
311
WH
X110
2
3
X120
3
2
712
PU
711
WH
E13LA
Headlamp
Assembly -
Left
312
WH
312
PU
E13RA
Headlamp
Assembly -
Right
E4G
Headlamp -
Left Low
Beam
E4E
Headlamp -
Left High
Beam
E4F
Headlamp -
Right High
Beam
E4H
Headlamp -
Right Low
Beam
150
BK
150
BK
J110
250
BK
250
BK
J120
150
BK
150
BK
250
BK
250
BK
X110
1
4
X120
1
4
150
BK
150
BK
250
BK
250
BK
G101
G102

LOC
DESC

High Intensity Discharge (T4F)

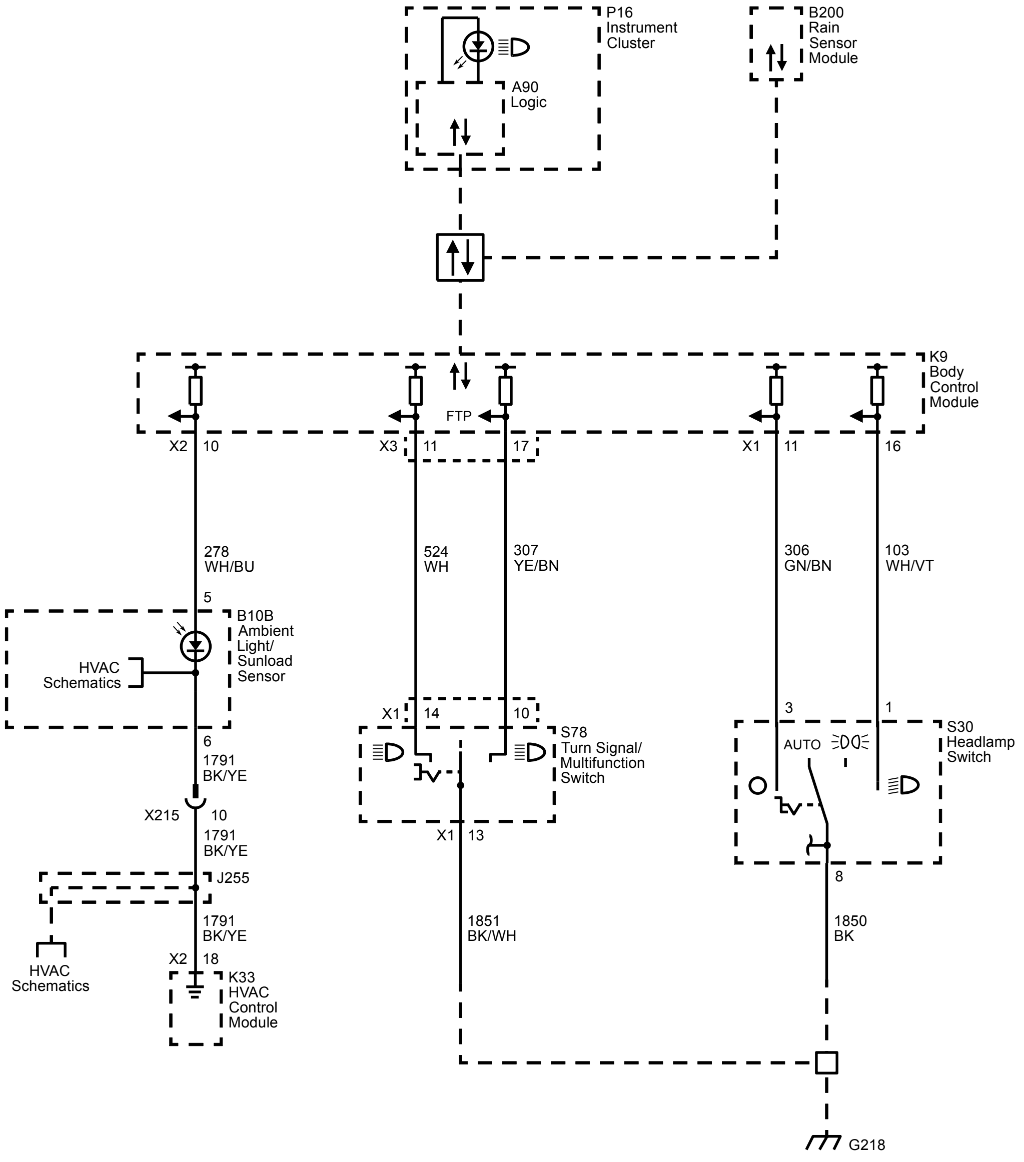

B+
X50A Fuse Block - Underhood
KR48 Headlamp High Beam Relay
KR49 Headlamp Low Beam Relay
F95UA 10A
F122UA 20A
F121UA 20A
X3 L2
X4 M3
X1 J4
A2
H4
C2
1969 BN/VT
1970 BN/YE
711 WH
712 YE
311 WH
312 YE
X5 18
13
K9 Body Control Module
X110 3
2
X120 3
2
E13LA Headlamp Assembly - Left
E13RA Headlamp Assembly - Right
E4G Headlamp - Left Low Beam
E4H Headlamp - Right Low Beam
1 2 4
712 PU
312 PU
E4E Headlamp - Left High Beam
E4F Headlamp - Right High Beam
12V
T7L Headlamp Ballast - Left
T7R Headlamp Ballast - Right
150 BK
250 BK
J110
J120
X110 1
4
X120 1
4
G101
G102

Daytime Running Lights (X88 with TB8 or T4F) or (Z88)


K9
Body
Control
Module
F10DL
F19DR
X4
7
X5
7
7538
GY/BU
7539
BU/BN
X4
J1
X3
G1
X50A
Fuse Block -
Underhood
X1
H2
H6
7538
GY/BU
7539
BU/BN
X110
6
X120
6
E13LA
Headlamp
Assembly -
Left
E13RA
Headlamp
Assembly -
Right
E4AC
Park/
Daytime
Running
Lamp -
Left
E4AD
Park/
Daytime
Running
Lamp -
Right
7538
GN
7539
GN
K166L
Multifunction
LED Control
Module - Left
Headlamp
K166R
Multifunction
LED Control
Module - Right
Headlamp
150
BK
250
BK
J110
J120
150
BK
150
BK
250
BK
250
BK
X110
1
4
X120
1
4
150
BK
150
BK
250
BK
250
BK
G101
G102

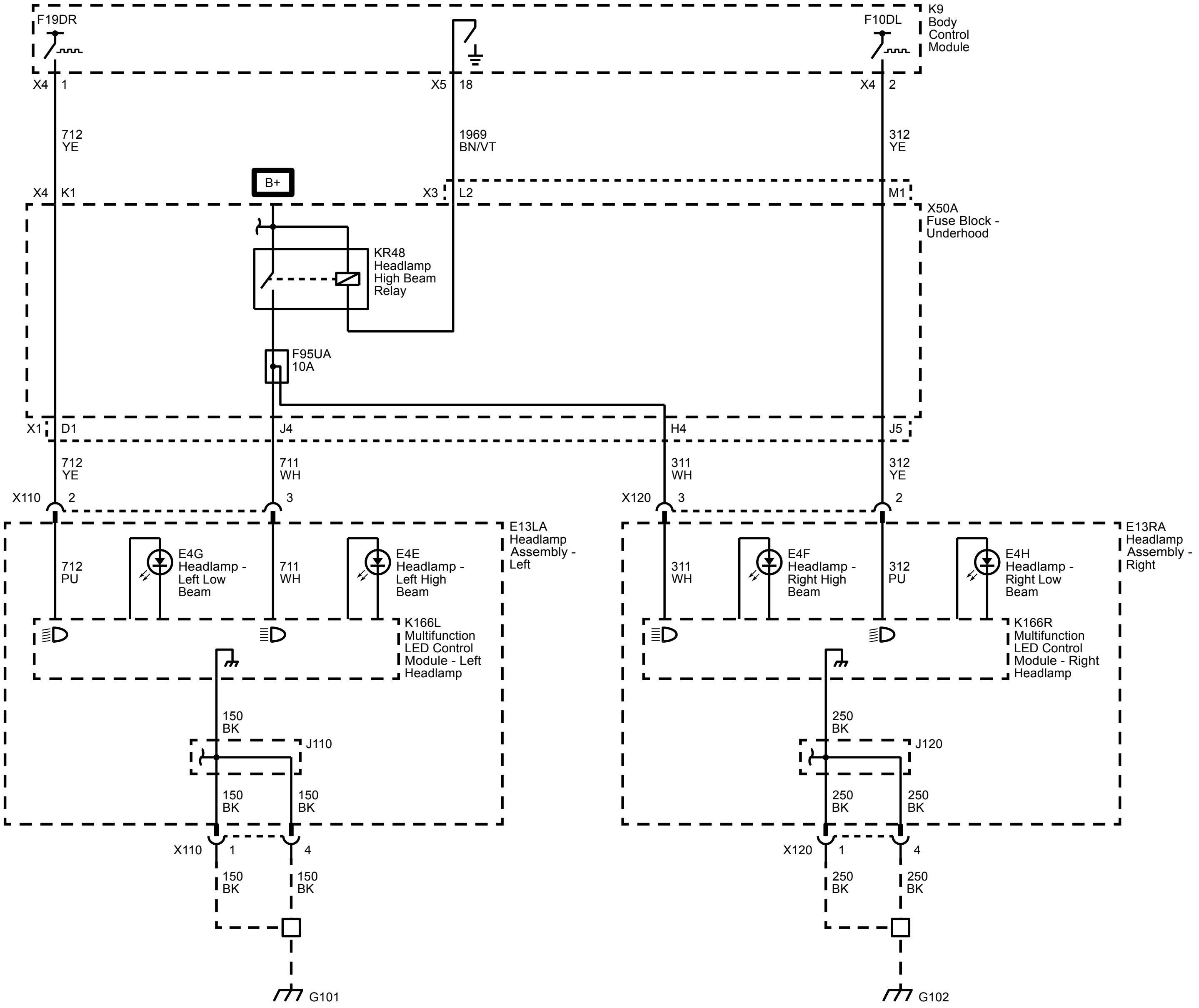
Headlights/Daytime Running Lights (DRL) Schematics (Z75)

Controls and Indicator

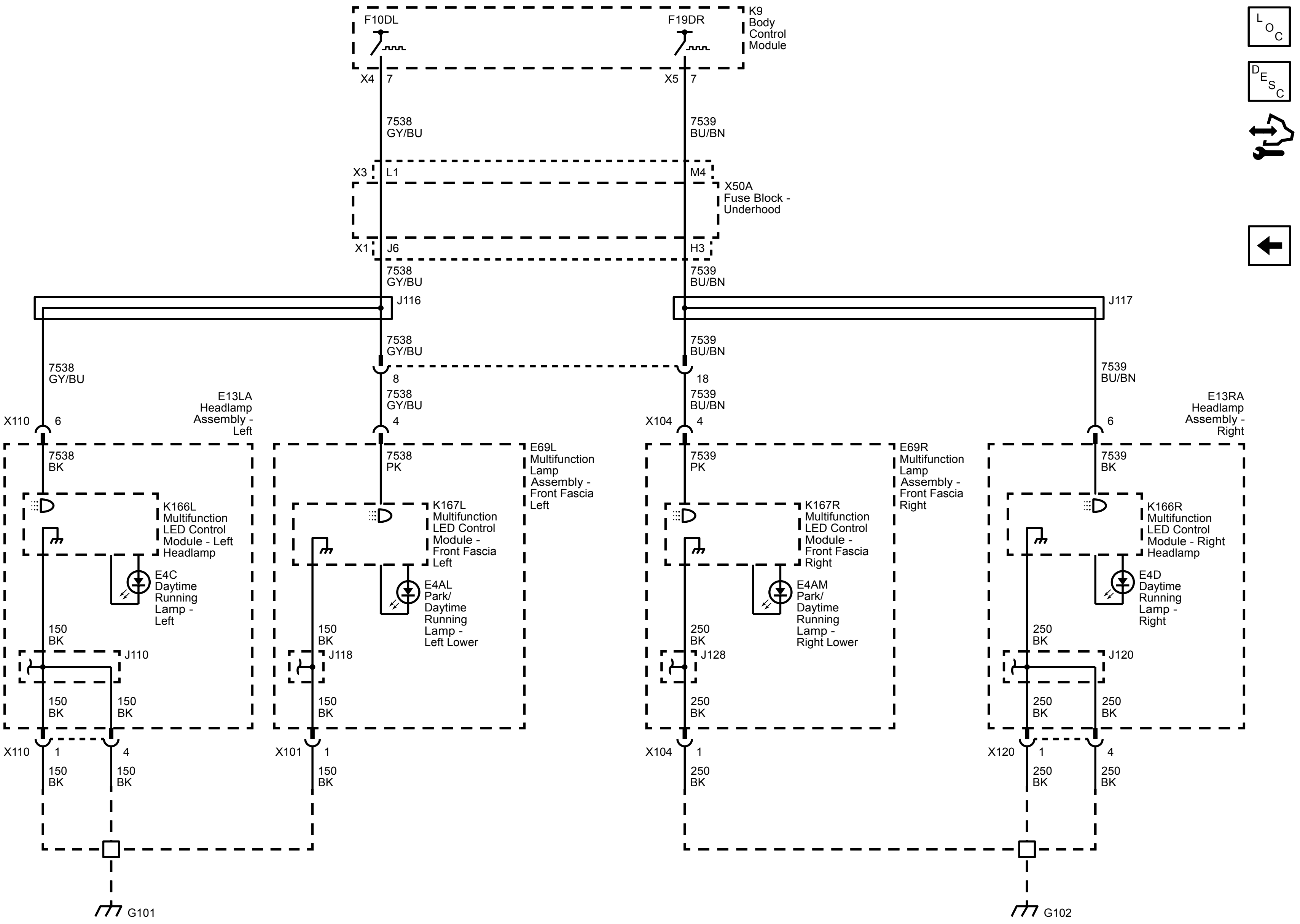


P16 Instrument Cluster
A90 Logic
B200 Rain Sensor Module
K9 Body Control Module
FTP
X2
10
X3
11
17
X1
11
16
278 WH/BU
524 WH
307 YE/BN
306 GN/BN
103 WH/VT
5
B10B Ambient Light/ Sunload Sensor
HVAC Schematics
6
1791 BK/YE
X215
10
1791 BK/YE
J255
1791 BK/YE
HVAC Schematics
X2
18
K33 HVAC Control Module
X1
14
10
S78 Turn Signal/ Multifunction Switch
X1
13
1851 BK/WH
3
1
AUTO
S30 Headlamp Switch
8
1850 BK
G218

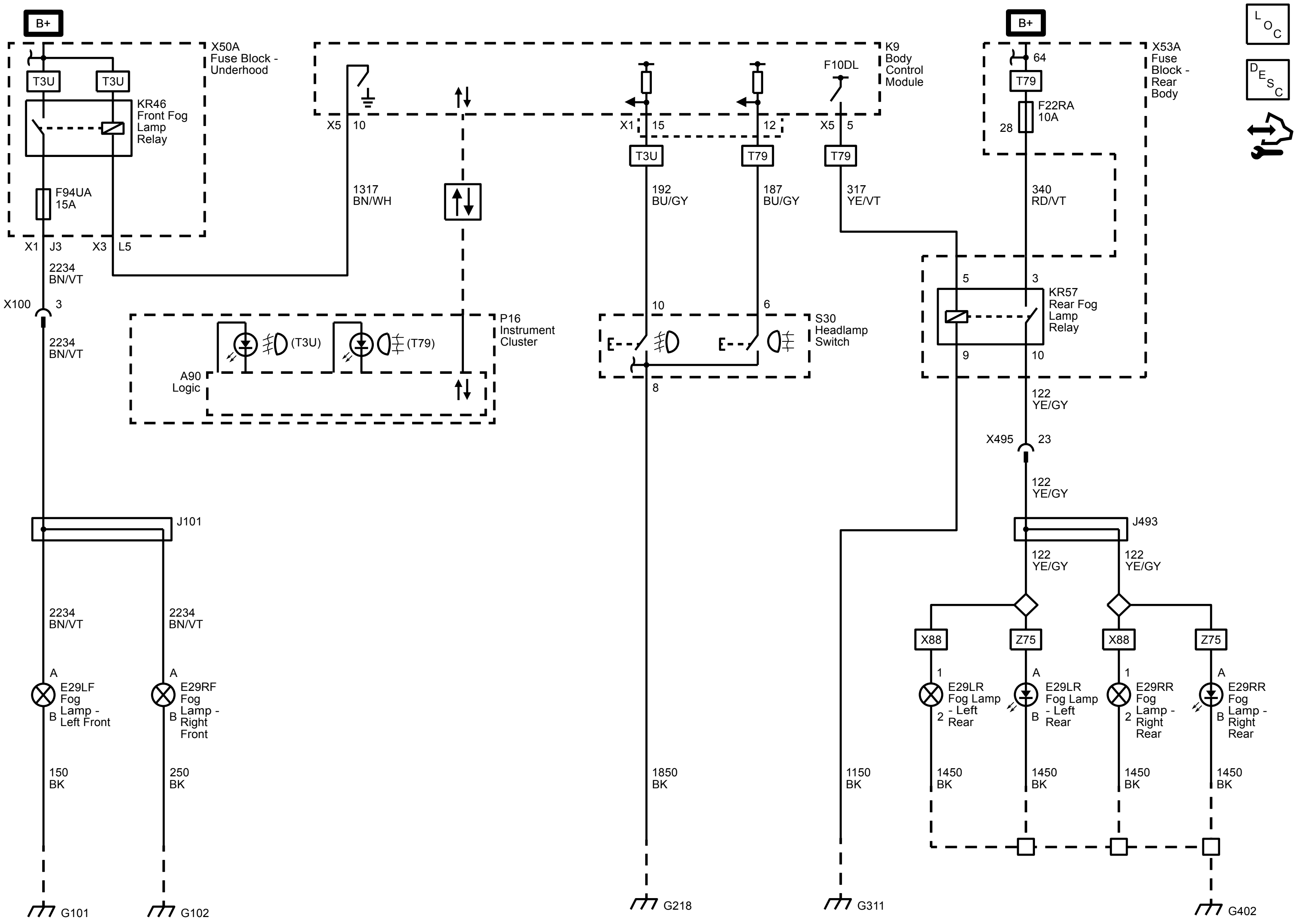
Headlights


F19DR
F10DL
K9
Body
Control
Module
X4 1
X5 18
X4 2
712
YE
1969
BN/VT
312
YE
B+
X4 K1
X3 L2
M1
X50A
Fuse Block -
Underhood
KR48
Headlamp
High Beam
Relay
F95UA
10A
X1 D1
J4
H4
J5
712
YE
711
WH
311
WH
312
YE
X110 2
3
X120 3
2
E13LA
Headlamp
Assembly -
Left
E13RA
Headlamp
Assembly -
Right
712
PU
E4G
Headlamp -
Left Low
Beam
711
WH
E4E
Headlamp -
Left High
Beam
311
WH
E4F
Headlamp -
Right High
Beam
312
PU
E4H
Headlamp -
Right Low
Beam
K166L
Multifunction
LED Control
Module - Left
Headlamp
K166R
Multifunction
LED Control
Module - Right
Headlamp
150
BK
J110
150
BK
150
BK
250
BK
J120
250
BK
250
BK
X110 1
4
150
BK
150
BK
X120 1
4
250
BK
250
BK
G101
G102

Daytime Running Lights

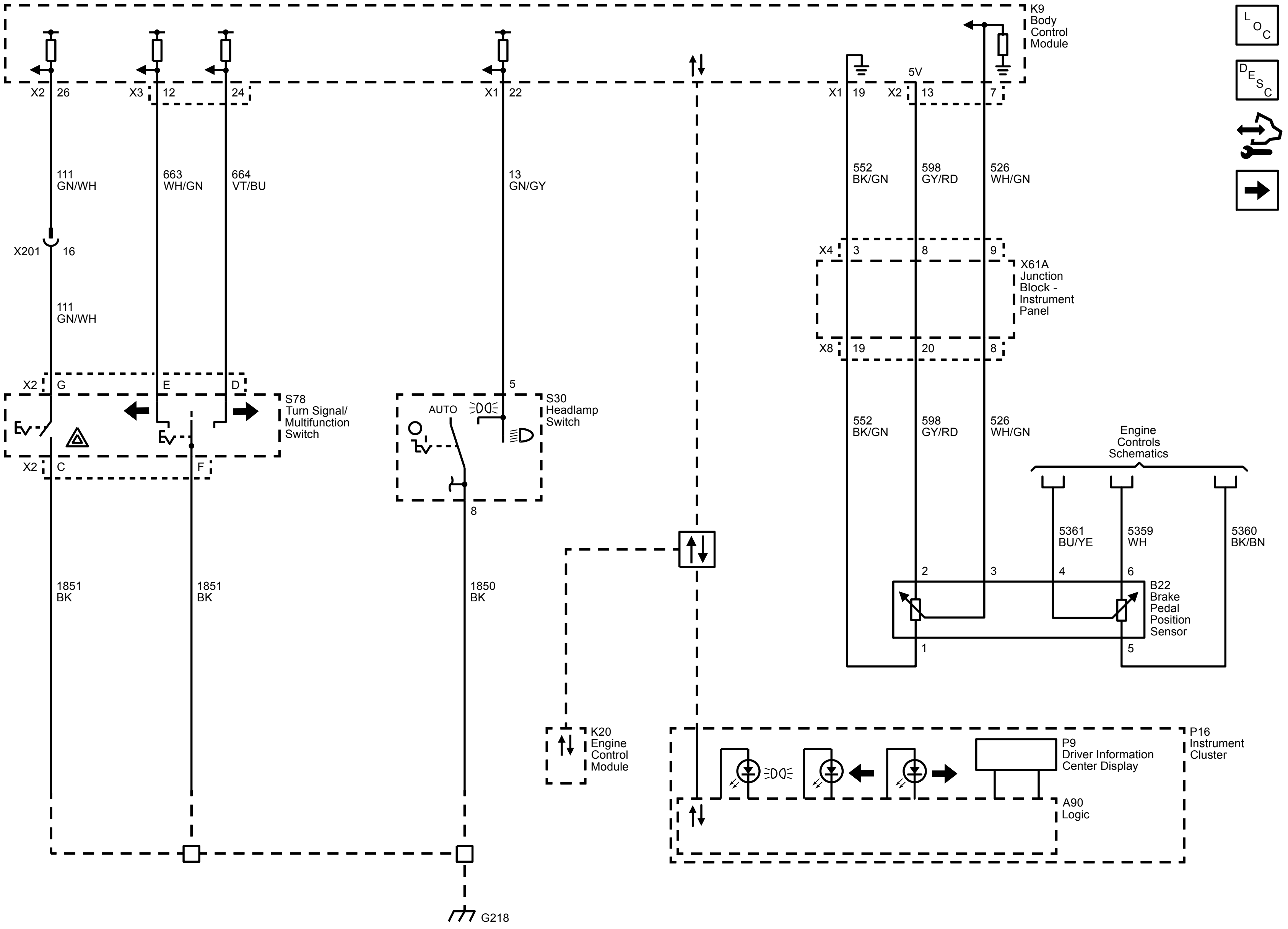

K9
Body
Control
Module
F10DL
F19DR
X4 7
X5 7
7538
GY/BU
7539
BU/BN
X3 L1
M4
X50A
Fuse Block -
Underhood
X1 J6
H3
J116
J117
8
18
X110 6
X104 4
4
6
E13LA
Headlamp
Assembly -
Left
E69L
Multifunction
Lamp
Assembly -
Front Fascia
Left
E69R
Multifunction
Lamp
Assembly -
Front Fascia
Right
E13RA
Headlamp
Assembly -
Right
7538
BK
7538
PK
7539
PK
7539
BK
K166L
Multifunction
LED Control
Module - Left
Headlamp
K167L
Multifunction
LED Control
Module -
Front Fascia
Left
K167R
Multifunction
LED Control
Module -
Front Fascia
Right
K166R
Multifunction
LED Control
Module - Right
Headlamp
E4C
Daytime
Running
Lamp -
Left
E4AL
Park/
Daytime
Running
Lamp -
Left Lower
E4AM
Park/
Daytime
Running
Lamp -
Right Lower
E4D
Daytime
Running
Lamp -
Right
150
BK
250
BK
J110
J118
J128
J120
X110 1
4
X101 1
X104 1
X120 1
4
G101
G102
LOC
DESC

Front Fog Lamps (T3U) and Rear Fog Lamps (T79)

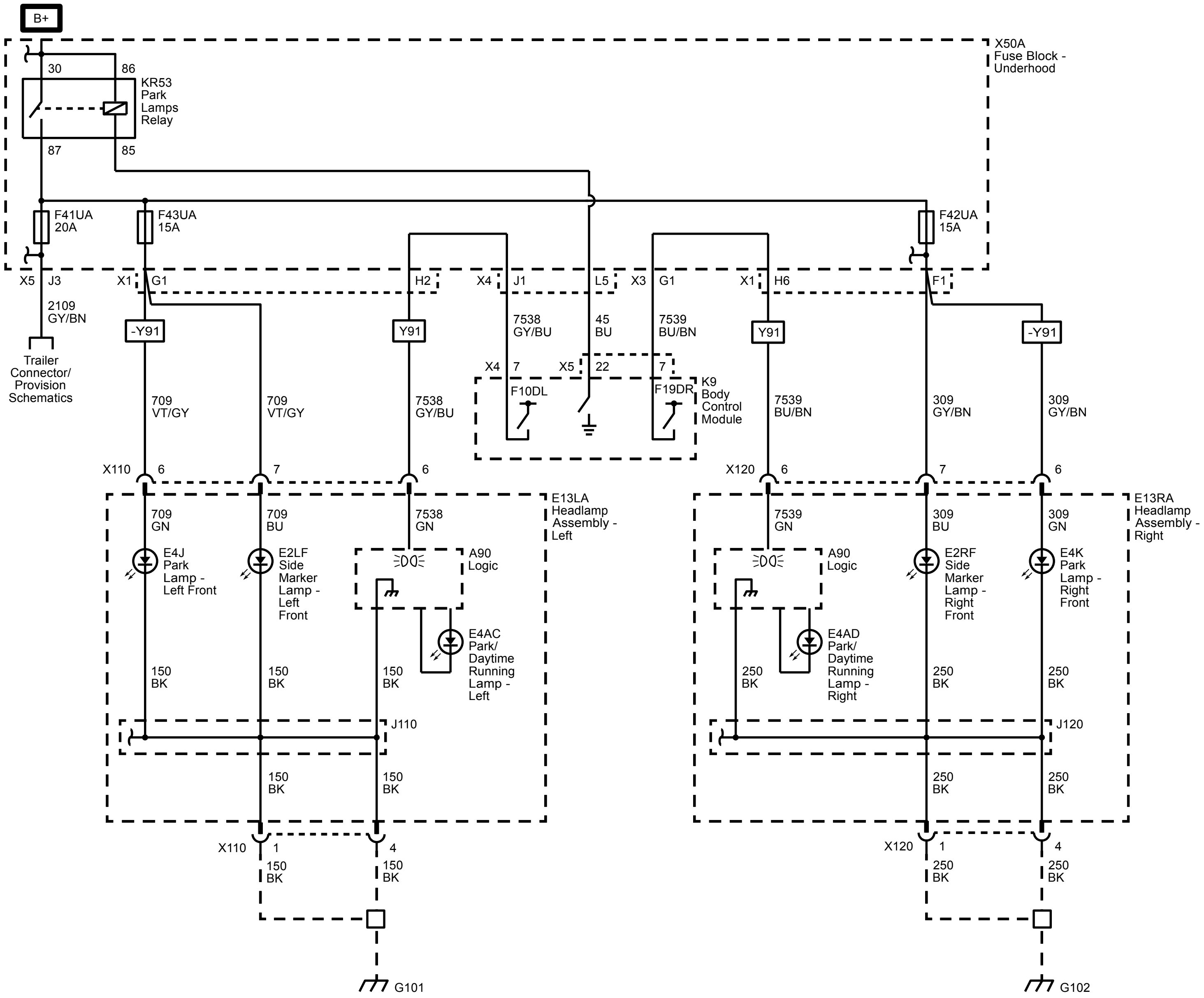

B+
X50A
Fuse Block -
Underhood
T3U
T3U
KR46
Front Fog
Lamp
Relay
F94UA
15A
X1
J3
X3
L5
2234
BN/VT
X100
3
2234
BN/VT
K9
Body
Control
Module
X5
10
1317
BN/WH
F10DL
X1
15
12
X5
5
T3U
T79
T79
192
BU/GY
187
BU/GY
317
YE/VT
P16
Instrument
Cluster
(T3U)
(T79)
A90
Logic
10
6
S30
Headlamp
Switch
8
B+
X53A
Fuse
Block -
Rear
Body
64
T79
F22RA
10A
28
340
RD/VT
5
3
KR57
Rear Fog
Lamp
Relay
9
10
122
YE/GY
X495
23
122
YE/GY
J101
2234
BN/VT
2234
BN/VT
A
E29LF
Fog
Lamp -
Left Front
B
A
E29RF
Fog
Lamp -
Right
Front
B
150
BK
250
BK
G101
G102
1850
BK
G218
1150
BK
G311
J493
122
YE/GY
122
YE/GY
X88
Z75
X88
Z75
1
E29LR
Fog Lamp
- Left
Rear
2
A
E29LR
Fog Lamp
- Left
Rear
B
1
E29RR
Fog
Lamp -
Right
Rear
2
A
E29RR
Fog
Lamp -
Right
Rear
B
1450
BK
1450
BK
1450
BK
1450
BK
G402
LOC
DESC

Exterior Lights Schematics

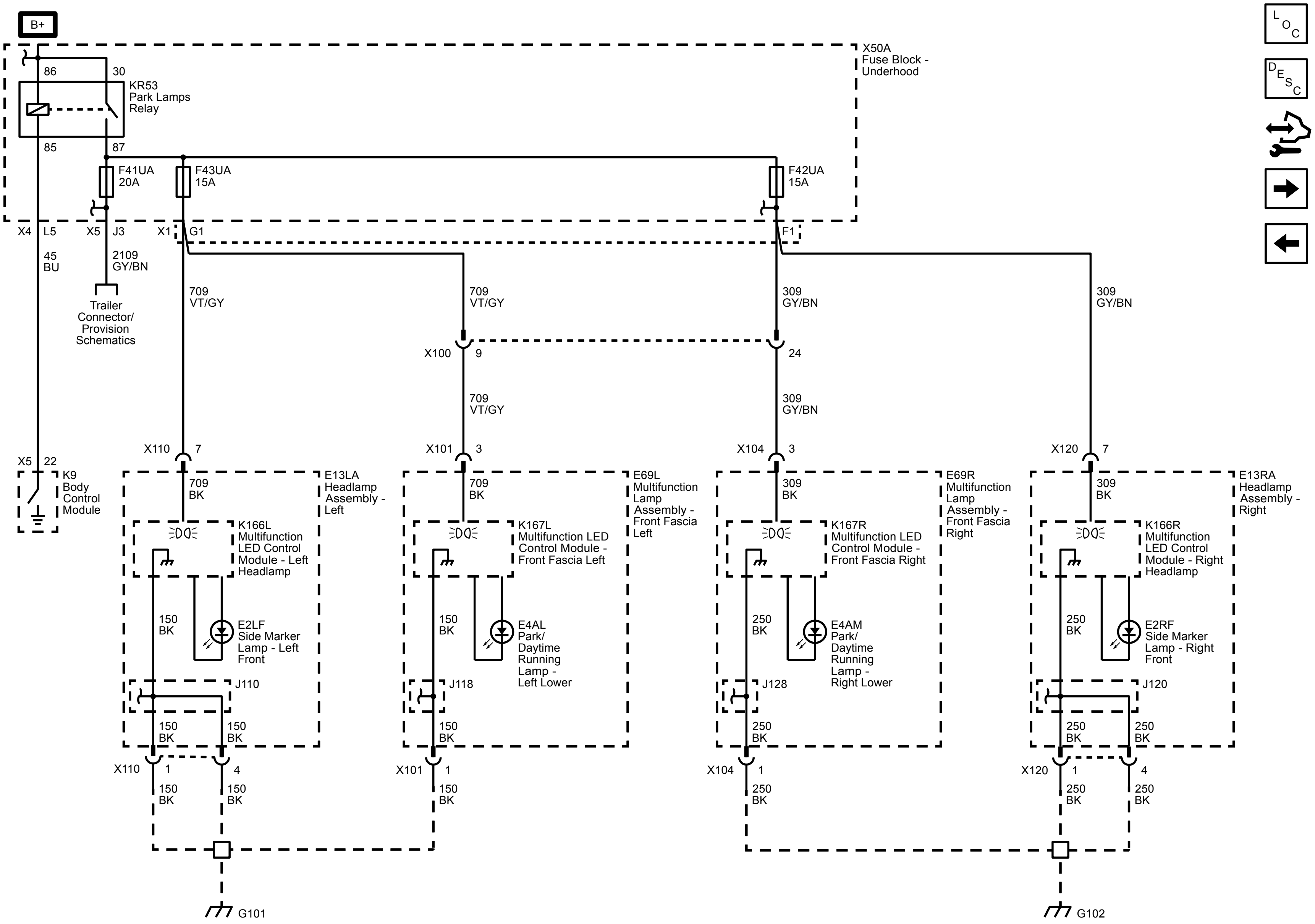
Parklamps and Controls


K9
Body
Control
Module
X2 26
X3 12
24
X1 22
X1 19
X2 13
5V
7
111
GN/WH
663
WH/GN
664
VT/BU
13
GN/GY
552
BK/GN
598
GY/RD
526
WH/GN
X201 16
111
GN/WH
X4 3
8
9
X61A
Junction
Block -
Instrument
Panel
X8 19
20
8
X2 G
E
D
S78
Turn Signal/
Multifunction
Switch
X2 C
F
5
AUTO
S30
Headlamp
Switch
8
552
BK/GN
598
GY/RD
526
WH/GN
Engine
Controls
Schematics
5361
BU/YE
5359
WH
5360
BK/BN
2
3
4
6
B22
Brake
Pedal
Position
Sensor
1
5
1851
BK
1851
BK
1850
BK
K20
Engine
Control
Module
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
G218
L
O
C
D
E
S
C

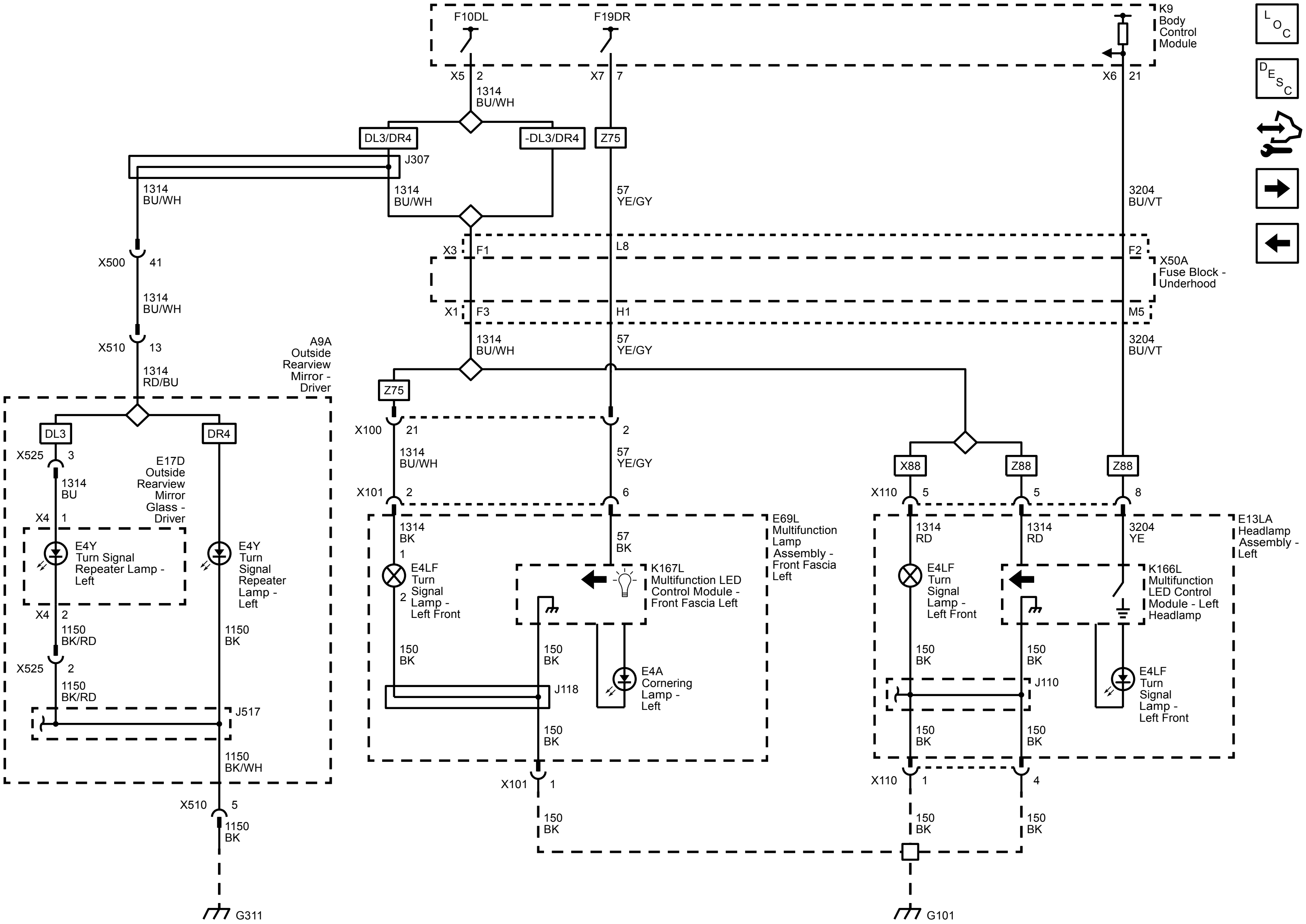
Park Lamps (X88 and Z88)


B+
X50A
Fuse Block -
Underhood
30
86
KR53
Park
Lamps
Relay
87
85
F41UA
20A
F43UA
15A
F42UA
15A
X5
J3
X1
G1
H2
X4
J1
L5
X3
G1
X1
H6
F1
2109
GY/BN
Trailer
Connector/
Provision
Schematics
-Y91
Y91
Y91
-Y91
7538
GY/BU
45
BU
7539
BU/BN
X4
7
X5
22
7
F10DL
F19DR
K9
Body
Control
Module
709
VT/GY
709
VT/GY
7538
GY/BU
7539
BU/BN
309
GY/BN
309
GY/BN
X110
6
7
6
X120
6
7
6
E13LA
Headlamp
Assembly -
Left
709
GN
709
BU
7538
GN
E4J
Park
Lamp -
Left Front
E2LF
Side
Marker
Lamp -
Left
Front
A90
Logic
E4AC
Park/
Daytime
Running
Lamp -
Left
150
BK
150
BK
150
BK
J110
150
BK
150
BK
X110
1
4
150
BK
150
BK
G101
E13RA
Headlamp
Assembly -
Right
7539
GN
309
BU
309
GN
A90
Logic
E2RF
Side
Marker
Lamp -
Right
Front
E4K
Park
Lamp -
Right
Front
E4AD
Park/
Daytime
Running
Lamp -
Right
250
BK
250
BK
250
BK
J120
250
BK
250
BK
X120
1
4
250
BK
250
BK
G102

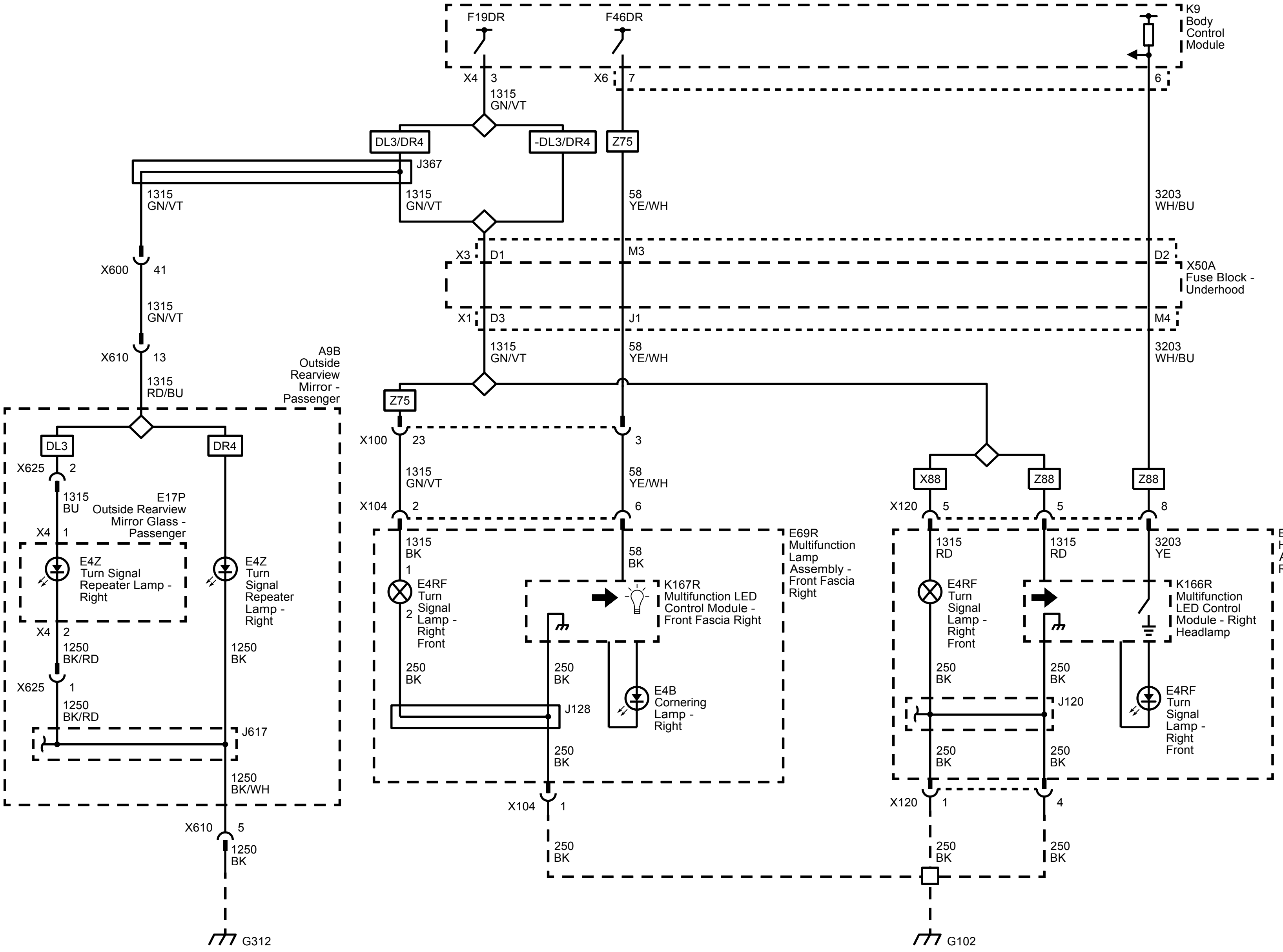
Park Lamps (Z75)


B+
86
30
KR53
Park Lamps
Relay
85
87
X50A
Fuse Block -
Underhood
F41UA
20A
F43UA
15A
F42UA
15A
X4
L5
X5
J3
X1
G1
F1
45
BU
2109
GY/BN
Trailer
Connector/
Provision
Schematics
709
VT/GY
709
VT/GY
309
GY/BN
309
GY/BN
X100
9
24
709
VT/GY
309
GY/BN
X5
22
K9
Body
Control
Module
X110
7
709
BK
E13LA
Headlamp
Assembly -
Left
K166L
Multifunction
LED Control
Module - Left
Headlamp
150
BK
E2LF
Side Marker
Lamp - Left
Front
J110
150
BK
150
BK
X110
1
4
150
BK
150
BK
X101
3
709
BK
E69L
Multifunction
Lamp
Assembly -
Front Fascia
Left
K167L
Multifunction LED
Control Module -
Front Fascia Left
150
BK
E4AL
Park/
Daytime
Running
Lamp -
Left Lower
J118
150
BK
X101
1
150
BK
X104
3
309
BK
E69R
Multifunction
Lamp
Assembly -
Front Fascia
Right
K167R
Multifunction LED
Control Module -
Front Fascia Right
250
BK
E4AM
Park/
Daytime
Running
Lamp -
Right Lower
J128
250
BK
X104
1
250
BK
X120
7
309
BK
E13RA
Headlamp
Assembly -
Right
K166R
Multifunction
LED Control
Module - Right
Headlamp
250
BK
E2RF
Side Marker
Lamp - Right
Front
J120
250
BK
250
BK
X120
1
4
250
BK
250
BK
G101
G102

Left Front Turn Signal Lamps

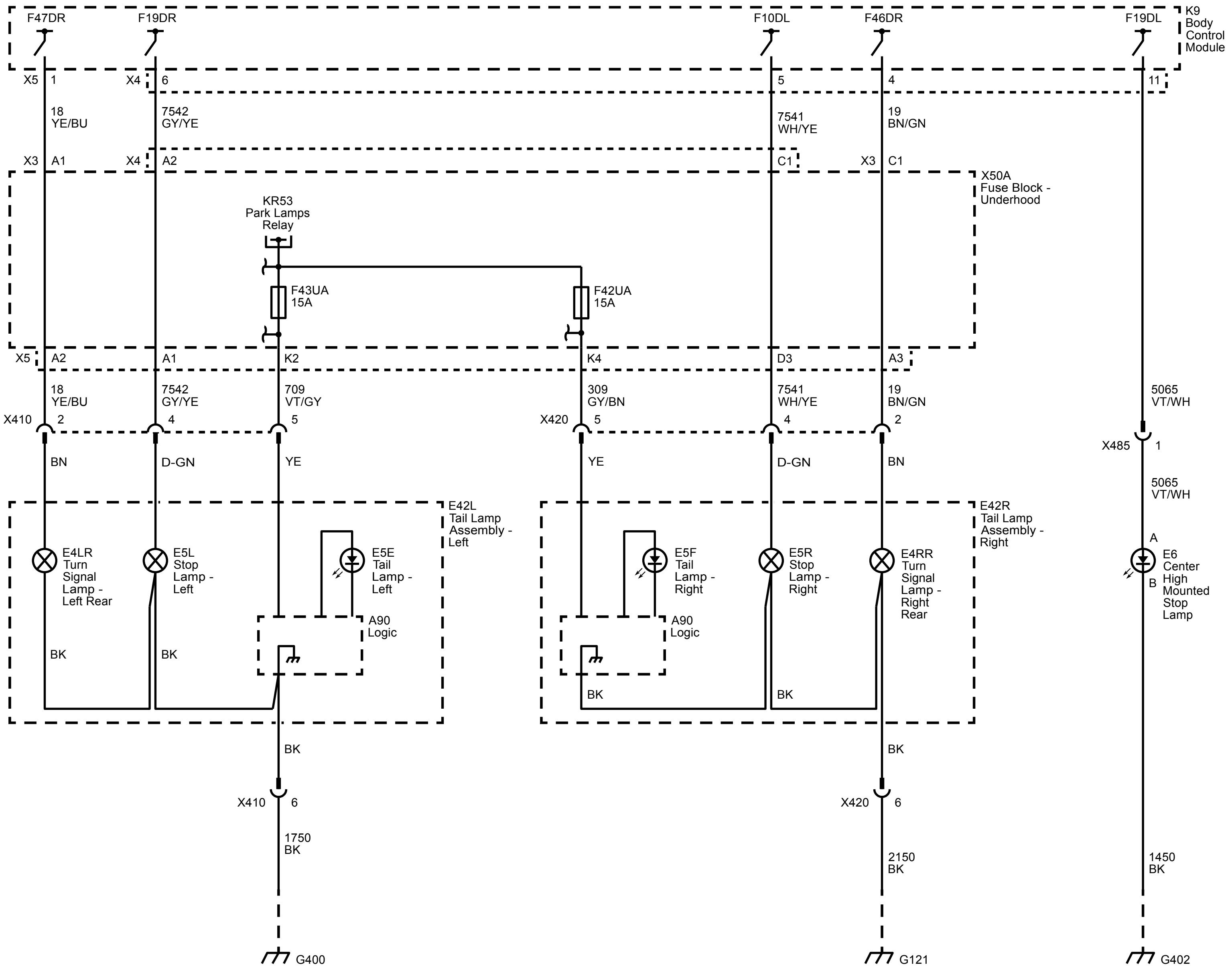

F10DL
F19DR
K9 Body Control Module
X5 2
X7 7
X6 21
1314 BU/WH
DL3/DR4
-DL3/DR4
Z75
J307
1314 BU/WH
1314 BU/WH
57 YE/GY
3204 BU/VT
X3 F1
L8
F2
X50A Fuse Block - Underhood
X1 F3
H1
M5
X500 41
1314 BU/WH
X510 13
1314 RD/BU
1314 BU/WH
57 YE/GY
3204 BU/VT
A9A Outside Rearview Mirror - Driver
Z75
DL3
DR4
X525 3
E17D Outside Rearview Mirror Glass - Driver
1314 BU
X4 1
E4Y Turn Signal Repeater Lamp - Left
E4Y Turn Signal Repeater Lamp - Left
X4 2
1150 BK/RD
1150 BK
X525 2
1150 BK/RD
J517
1150 BK/WH
X510 5
1150 BK
G311
X100 21
2
1314 BU/WH
57 YE/GY
X101 2
6
E69L Multifunction Lamp Assembly - Front Fascia Left
1314 BK
57 BK
1
E4LF Turn Signal Lamp - Left Front
2
K167L Multifunction LED Control Module - Front Fascia Left
150 BK
150 BK
J118
E4A Cornering Lamp - Left
150 BK
X101 1
150 BK
X88
Z88
Z88
X110 5
5
8
E13LA Headlamp Assembly - Left
1314 RD
1314 RD
3204 YE
E4LF Turn Signal Lamp - Left Front
K166L Multifunction LED Control Module - Left Headlamp
150 BK
150 BK
J110
E4LF Turn Signal Lamp - Left Front
150 BK
150 BK
X110 1
4
150 BK
150 BK
G101
L O C
D E S C

Right Front Turn Signal Lamps

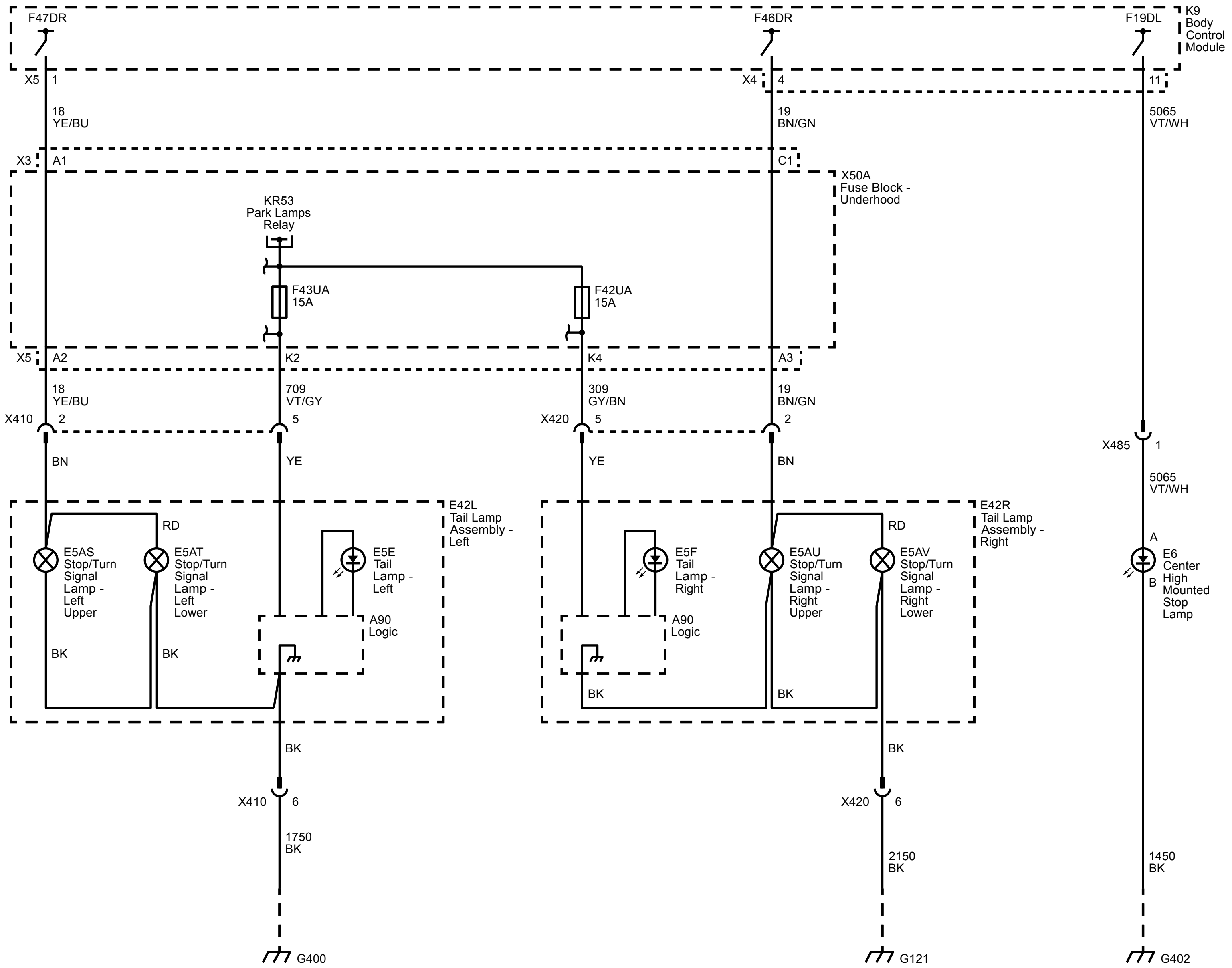

F19DR
F46DR
K9
Body
Control
Module
X4 3
X6 7
6
1315
GN/VT
DL3/DR4
-DL3/DR4
Z75
J367
1315
GN/VT
1315
GN/VT
58
YE/WH
3203
WH/BU
X3 D1
M3
D2
X50A
Fuse Block -
Underhood
X1 D3
J1
M4
X600 41
1315
GN/VT
X610 13
1315
RD/BU
1315
GN/VT
58
YE/WH
3203
WH/BU
A9B
Outside
Rearview
Mirror -
Passenger
Z75
DL3
DR4
X625 2
1315
BU
E17P
Outside Rearview
Mirror Glass -
Passenger
X4 1
E4Z
Turn Signal
Repeater Lamp -
Right
E4Z
Turn
Signal
Repeater
Lamp -
Right
X4 2
1250
BK/RD
1250
BK
X625 1
1250
BK/RD
J617
1250
BK/WH
X610 5
1250
BK
G312
X100 23
3
1315
GN/VT
58
YE/WH
X104 2
6
E69R
Multifunction
Lamp
Assembly -
Front Fascia
Right
1315
BK
58
BK
1
E4RF
Turn
Signal
Lamp -
Right
Front
2
K167R
Multifunction LED
Control Module -
Front Fascia Right
250
BK
250
BK
E4B
Cornering
Lamp -
Right
J128
250
BK
X104 1
250
BK
X88
Z88
Z88
X120 5
5
8
E13RA
Headlamp
Assembly -
Right
1315
RD
1315
RD
3203
YE
E4RF
Turn
Signal
Lamp -
Right
Front
K166R
Multifunction
LED Control
Module - Right
Headlamp
250
BK
250
BK
J120
E4RF
Turn
Signal
Lamp -
Right
Front
250
BK
250
BK
X120 1
4
250
BK
250
BK
G102

LOC
DESC

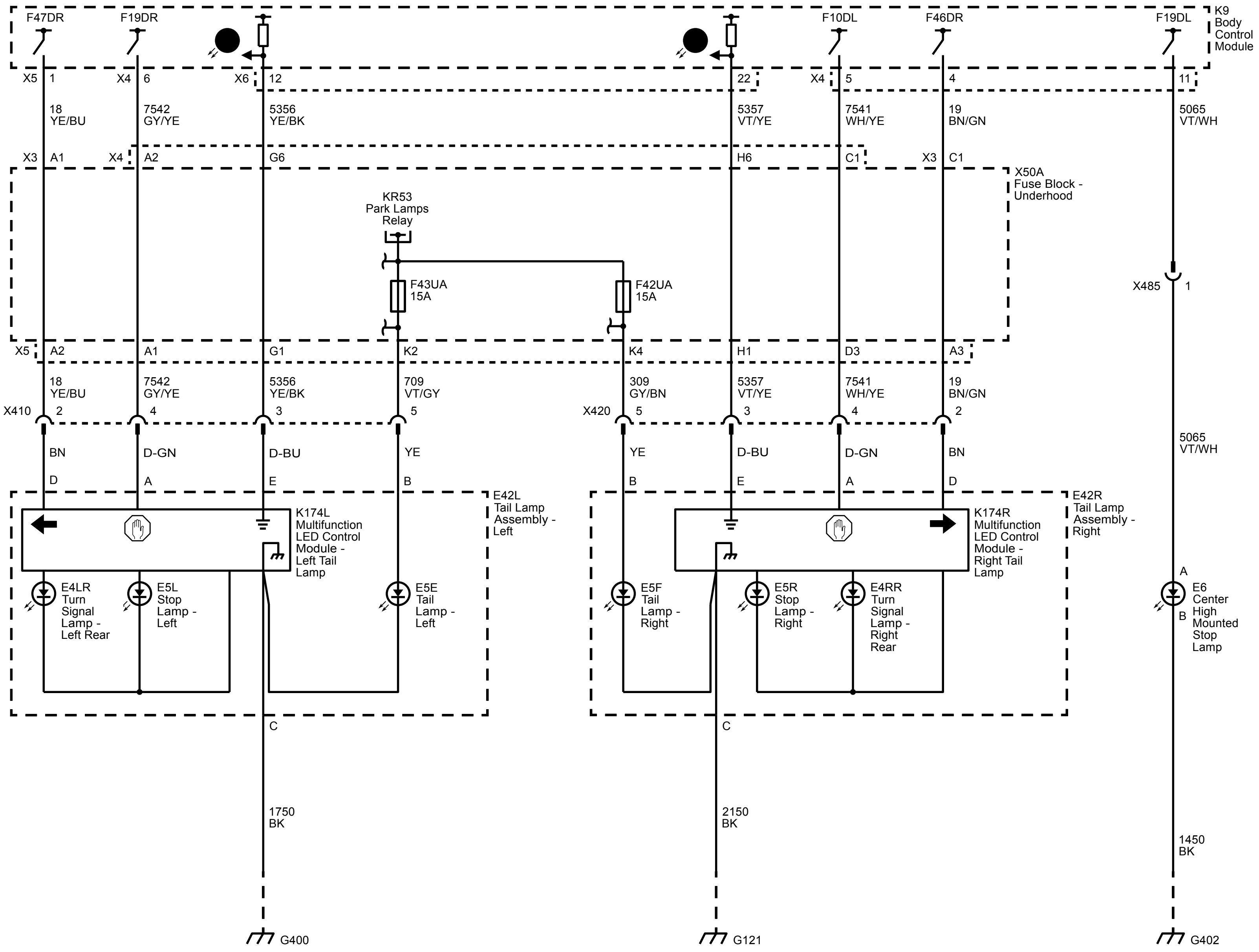
CHMSL and Tail Lamps (X88 with T89)


F47DR
F19DR
F10DL
F46DR
F19DL
K9
Body
Control
Module
X5 1
X4 6
5
4
11
18
YE/BU
7542
GY/YE
7541
WH/YE
19
BN/GN
X3 A1
X4 A2
C1
X3 C1
X50A
Fuse Block -
Underhood
KR53
Park Lamps
Relay
F43UA
15A
F42UA
15A
X5 A2
A1
K2
K4
D3
A3
18
YE/BU
7542
GY/YE
709
VT/GY
309
GY/BN
7541
WH/YE
19
BN/GN
5065
VT/WH
X410 2
4
5
X420 5
4
2
X485 1
BN
D-GN
YE
YE
D-GN
BN
5065
VT/WH
E42L
Tail Lamp
Assembly -
Left
E42R
Tail Lamp
Assembly -
Right
E4LR
Turn
Signal
Lamp -
Left Rear
E5L
Stop
Lamp -
Left
E5E
Tail
Lamp -
Left
A90
Logic
E5F
Tail
Lamp -
Right
A90
Logic
E5R
Stop
Lamp -
Right
E4RR
Turn
Signal
Lamp -
Right
Rear
A
E6
Center
High
Mounted
Stop
Lamp
B
BK
BK
BK
BK
BK
BK
X410 6
1750
BK
X420 6
2150
BK
1450
BK
G400
G121
G402

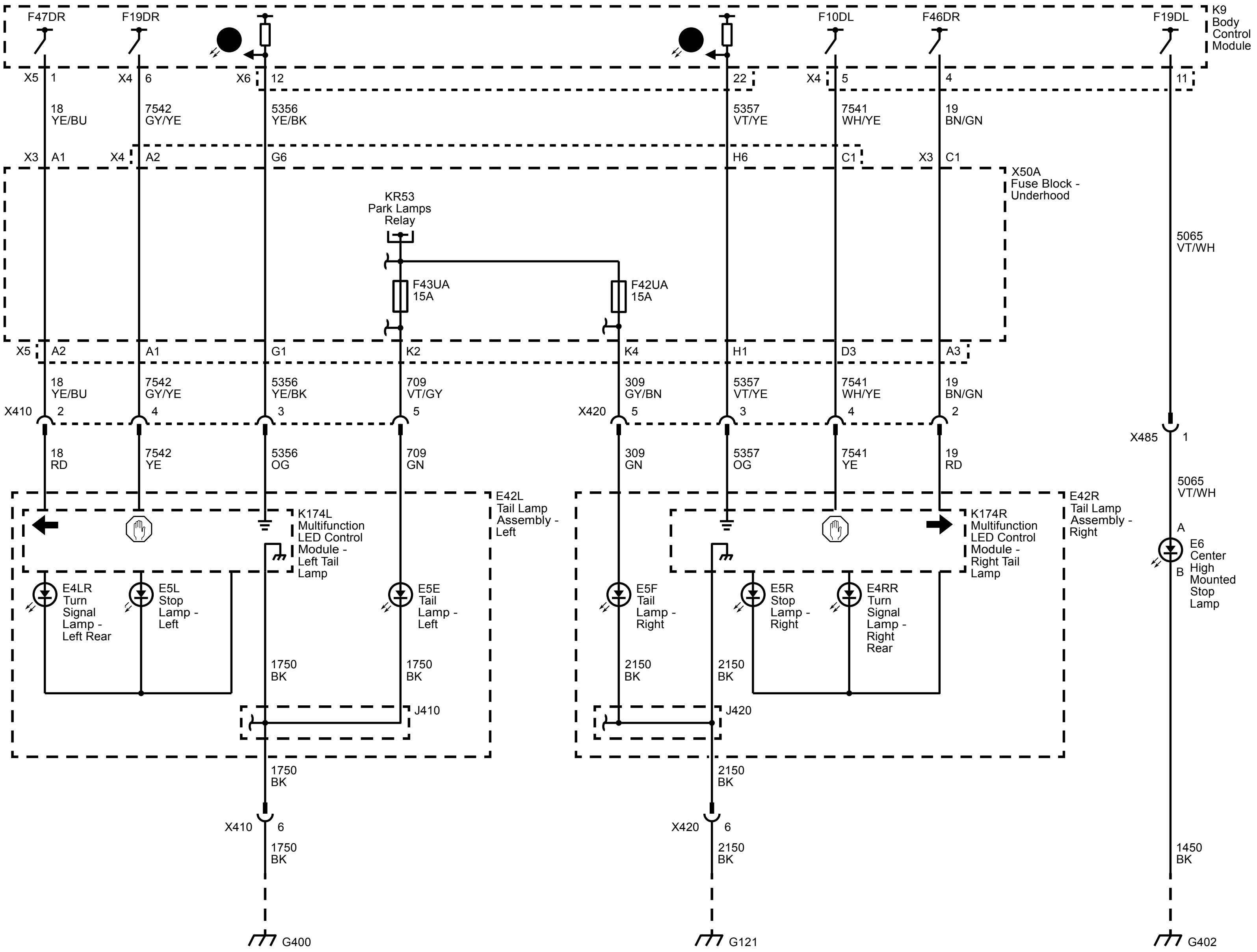
CHMSL and Tail Lamps (X88 without T89)


F47DR
F46DR
F19DL
K9
Body
Control
Module
X5
1
X4
4
11
18
YE/BU
19
BN/GN
5065
VT/WH
X3
A1
C1
X50A
Fuse Block -
Underhood
KR53
Park Lamps
Relay
F43UA
15A
F42UA
15A
X5
A2
K2
K4
A3
18
YE/BU
709
VT/GY
309
GY/BN
19
BN/GN
X410
2
5
X420
5
2
X485
1
BN
YE
YE
BN
5065
VT/WH
E42L
Tail Lamp
Assembly -
Left
RD
E5AS
Stop/Turn
Signal
Lamp -
Left
Upper
E5AT
Stop/Turn
Signal
Lamp -
Left
Lower
E5E
Tail
Lamp -
Left
A90
Logic
BK
BK
E42R
Tail Lamp
Assembly -
Right
RD
E5F
Tail
Lamp -
Right
E5AU
Stop/Turn
Signal
Lamp -
Right
Upper
E5AV
Stop/Turn
Signal
Lamp -
Right
Lower
A90
Logic
BK
BK
A
E6
Center
High
Mounted
Stop
Lamp
B
BK
BK
X410
6
X420
6
1750
BK
2150
BK
1450
BK
G400
G121
G402

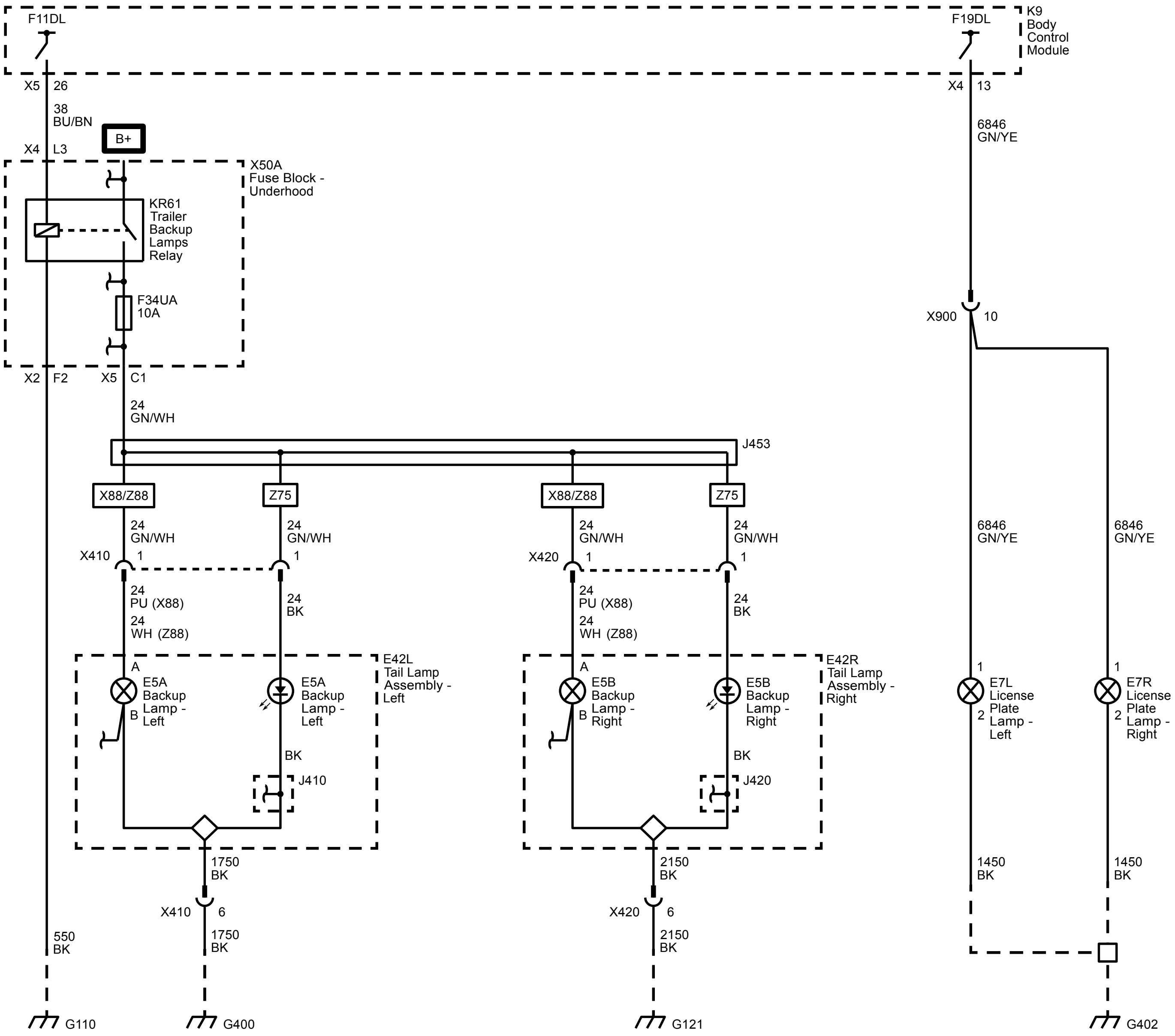
CHMSL and Tail Lamps (Z88)


F47DR
F19DR
F10DL
F46DR
F19DL
K9
Body
Control
Module
X5 1
X4 6
X6 12
22
X4 5
4
11
18
YE/BU
7542
GY/YE
5356
YE/BK
5357
VT/YE
7541
WH/YE
19
BN/GN
5065
VT/WH
X3 A1
X4 A2
G6
H6
C1
X3 C1
X50A
Fuse Block -
Underhood
KR53
Park Lamps
Relay
F43UA
15A
F42UA
15A
X485 1
X5 A2
A1
G1
K2
K4
H1
D3
A3
709
VT/GY
309
GY/BN
X410 2
4
3
5
X420 5
3
4
2
BN
D-GN
D-BU
YE
D
A
E
B
E42L
Tail Lamp
Assembly -
Left
K174L
Multifunction
LED Control
Module -
Left Tail
Lamp
E42R
Tail Lamp
Assembly -
Right
K174R
Multifunction
LED Control
Module -
Right Tail
Lamp
E4LR
Turn
Signal
Lamp -
Left Rear
E5L
Stop
Lamp -
Left
E5E
Tail
Lamp -
Left
E5F
Tail
Lamp -
Right
E5R
Stop
Lamp -
Right
E4RR
Turn
Signal
Lamp -
Right
Rear
A
E6
Center
High
Mounted
Stop
Lamp
B
C
1750
BK
2150
BK
1450
BK
G400
G121
G402

CHMSL and Tail Lamps (Z75)

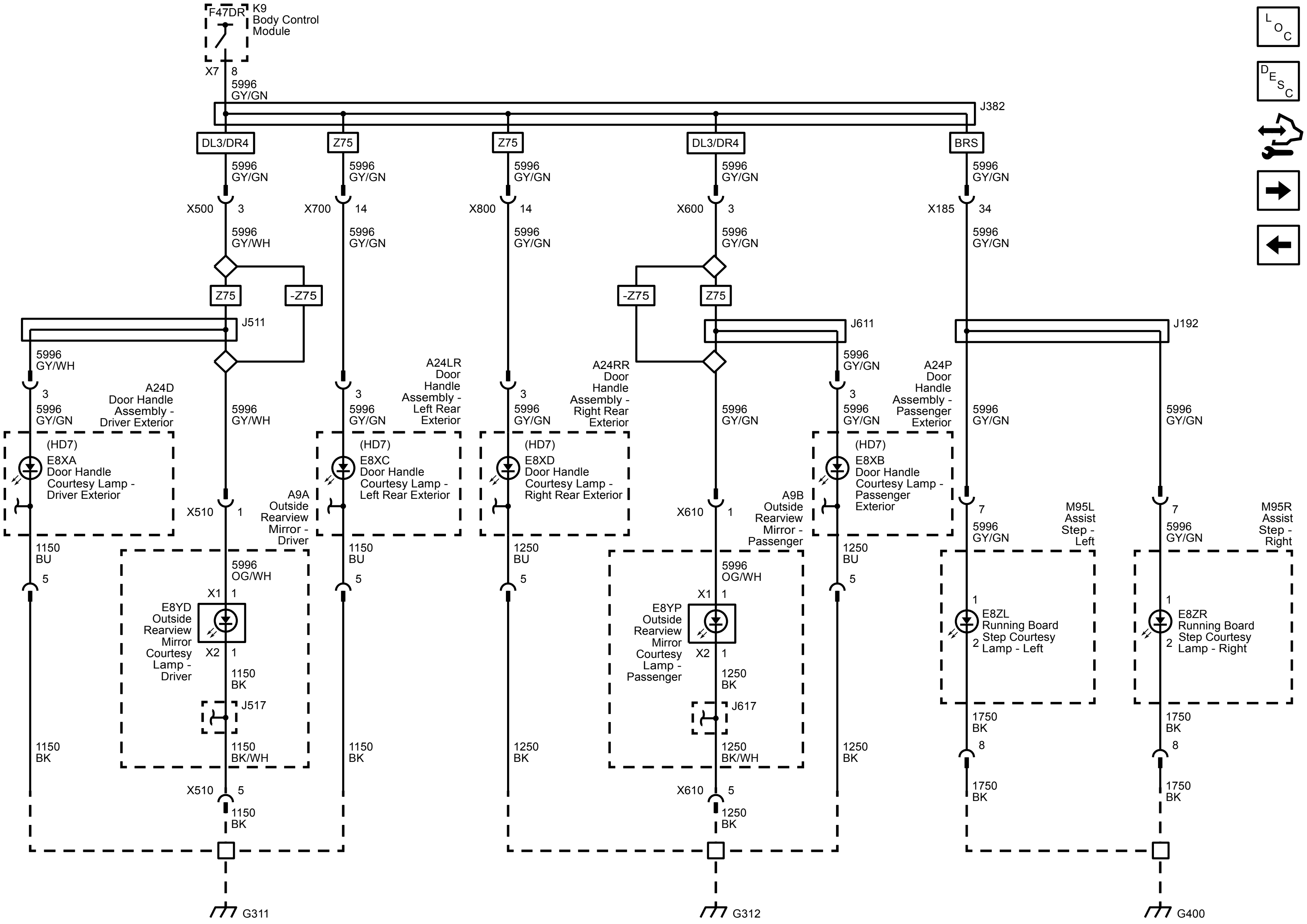

F47DR
F19DR
F10DL
F46DR
F19DL
K9
Body
Control
Module
X5
1
X4
6
X6
12
22
X4
5
4
11
18
YE/BU
7542
GY/YE
5356
YE/BK
5357
VT/YE
7541
WH/YE
19
BN/GN
X3
A1
X4
A2
G6
H6
C1
X3
C1
X50A
Fuse Block -
Underhood
KR53
Park Lamps
Relay
F43UA
15A
F42UA
15A
5065
VT/WH
X5
A2
A1
G1
K2
K4
H1
D3
A3
18
YE/BU
7542
GY/YE
5356
YE/BK
709
VT/GY
309
GY/BN
5357
VT/YE
7541
WH/YE
19
BN/GN
X410
2
4
3
5
X420
5
3
4
2
X485
1
18
RD
7542
YE
5356
OG
709
GN
309
GN
5357
OG
7541
YE
19
RD
5065
VT/WH
E42L
Tail Lamp
Assembly -
Left
K174L
Multifunction
LED Control
Module -
Left Tail
Lamp
E42R
Tail Lamp
Assembly -
Right
K174R
Multifunction
LED Control
Module -
Right Tail
Lamp
A
E6
Center
High
Mounted
Stop
Lamp
B
E4LR
Turn
Signal
Lamp -
Left Rear
E5L
Stop
Lamp -
Left
E5E
Tail
Lamp -
Left
E5F
Tail
Lamp -
Right
E5R
Stop
Lamp -
Right
E4RR
Turn
Signal
Lamp -
Right
Rear
1750
BK
1750
BK
2150
BK
2150
BK
J410
J420
1750
BK
2150
BK
X410
6
X420
6
1750
BK
2150
BK
1450
BK
G400
G121
G402

Backup and License Plate Lamps


F11DL
F19DL
K9
Body
Control
Module
X5 26
X4 13
38
BU/BN
B+
X4 L3
6846
GN/YE
X50A
Fuse Block -
Underhood
KR61
Trailer
Backup
Lamps
Relay
F34UA
10A
X900 10
X2 F2
X5 C1
24
GN/WH
J453
X88/Z88
Z75
X88/Z88
Z75
24
GN/WH
24
GN/WH
24
GN/WH
24
GN/WH
6846
GN/YE
6846
GN/YE
X410 1
1
X420 1
1
24
PU (X88)
24
WH (Z88)
24
BK
24
PU (X88)
24
WH (Z88)
24
BK
E42L
Tail Lamp
Assembly -
Left
E42R
Tail Lamp
Assembly -
Right
A
E5A
Backup
Lamp -
Left
B
E5A
Backup
Lamp -
Left
A
E5B
Backup
Lamp -
Right
B
E5B
Backup
Lamp -
Right
1
E7L
License
Plate
Lamp -
Left
2
1
E7R
License
Plate
Lamp -
Right
2
BK
J410
BK
J420
1750
BK
2150
BK
1450
BK
1450
BK
X410 6
X420 6
1750
BK
2150
BK
550
BK
G110
G400
G121
G402

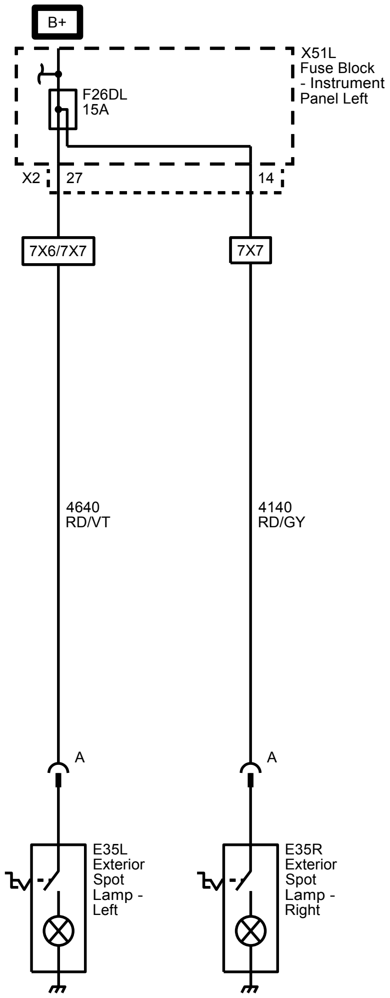
LOC
DESC
→
←

Courtesy Lamps

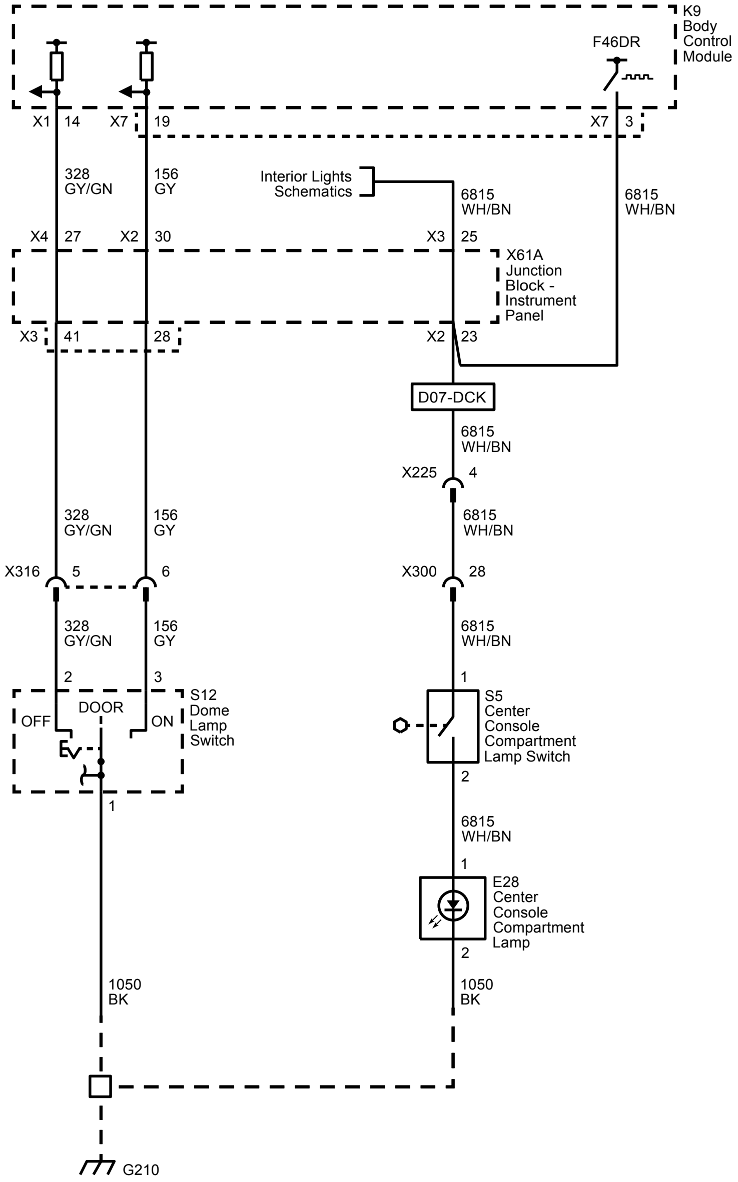


F47DR
K9
Body Control
Module
X7
8
5996
GY/GN
J382
DL3/DR4
Z75
Z75
DL3/DR4
BRS
5996
GY/GN
X500
3
5996
GY/WH
X700
14
X800
14
X600
3
X185
34
Z75
-Z75
-Z75
Z75
J511
J611
J192
5996
GY/WH
3
5996
GY/GN
A24D
Door Handle
Assembly -
Driver Exterior
(HD7)
E8XA
Door Handle
Courtesy Lamp -
Driver Exterior
A24LR
Door
Handle
Assembly -
Left Rear
Exterior
E8XC
Door Handle
Courtesy Lamp -
Left Rear Exterior
A24RR
Door
Handle
Assembly -
Right Rear
Exterior
E8XD
Door Handle
Courtesy Lamp -
Right Rear Exterior
A24P
Door
Handle
Assembly -
Passenger
Exterior
E8XB
Door Handle
Courtesy Lamp -
Passenger
Exterior
A9A
Outside
Rearview
Mirror -
Driver
X510
1
5996
OG/WH
X1
1
E8YD
Outside
Rearview
Mirror
Courtesy
Lamp -
Driver
X2
1
1150
BK
J517
1150
BK/WH
X510
5
A9B
Outside
Rearview
Mirror -
Passenger
X610
1
E8YP
Outside
Rearview
Mirror
Courtesy
Lamp -
Passenger
1250
BK
J617
1250
BK/WH
X610
5
1150
BU
5
1150
BK
1250
BU
1250
BK
M95L
Assist
Step -
Left
7
E8ZL
Running Board
Step Courtesy
Lamp - Left
M95R
Assist
Step -
Right
E8ZR
Running Board
Step Courtesy
Lamp - Right
2
1750
BK
8
G311
G312
G400

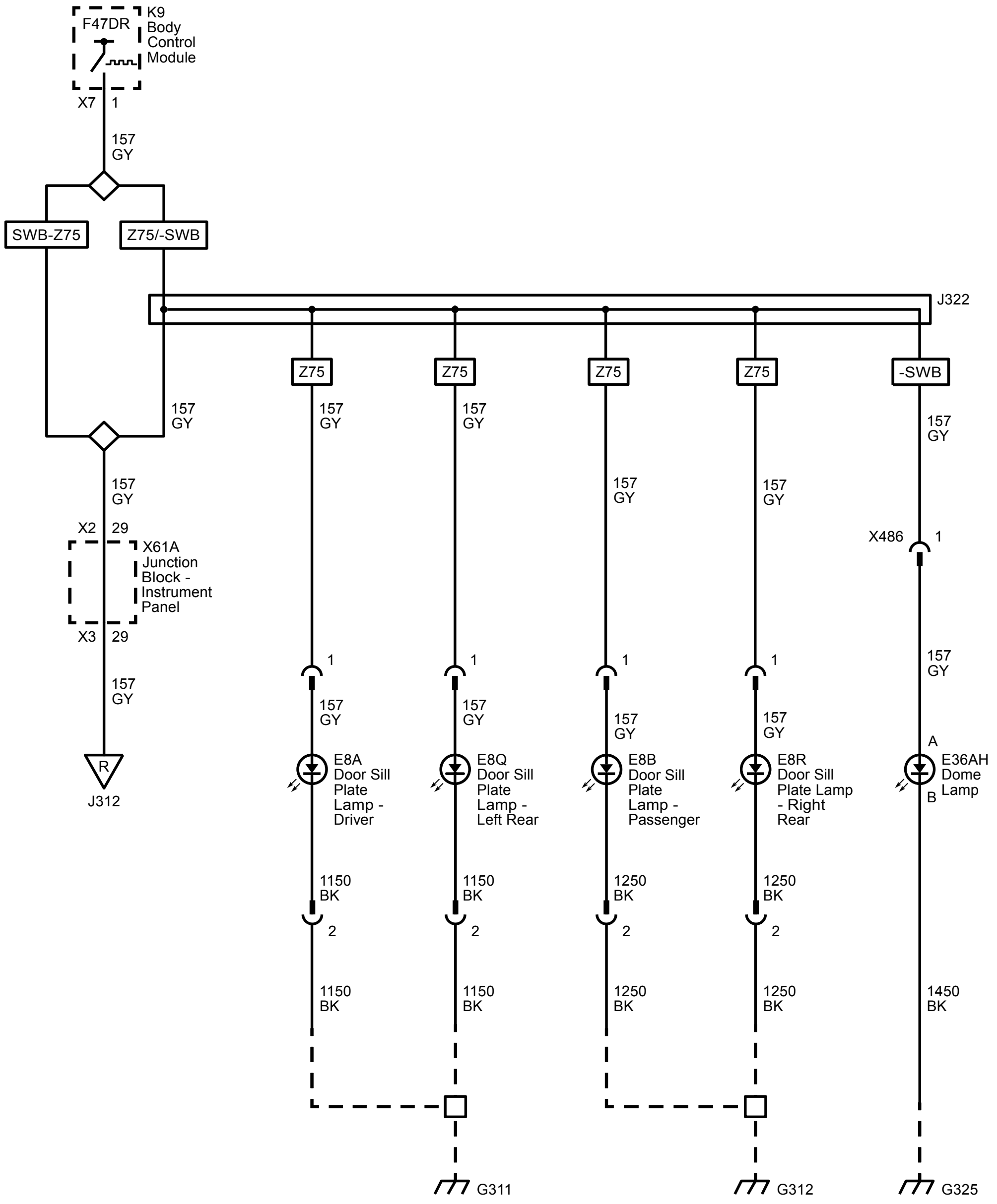
Spot Light (7X6 and 7X7)


B+
X51L
Fuse Block
- Instrument
Panel Left
F26DL
15A
X2
27
14
7X6/7X7
7X7
4640
RD/VT
4140
RD/GY
A
A
E35L
Exterior
Spot
Lamp -
Left
E35R
Exterior
Spot
Lamp -
Right

Controls and Center Console Compartment Lamp

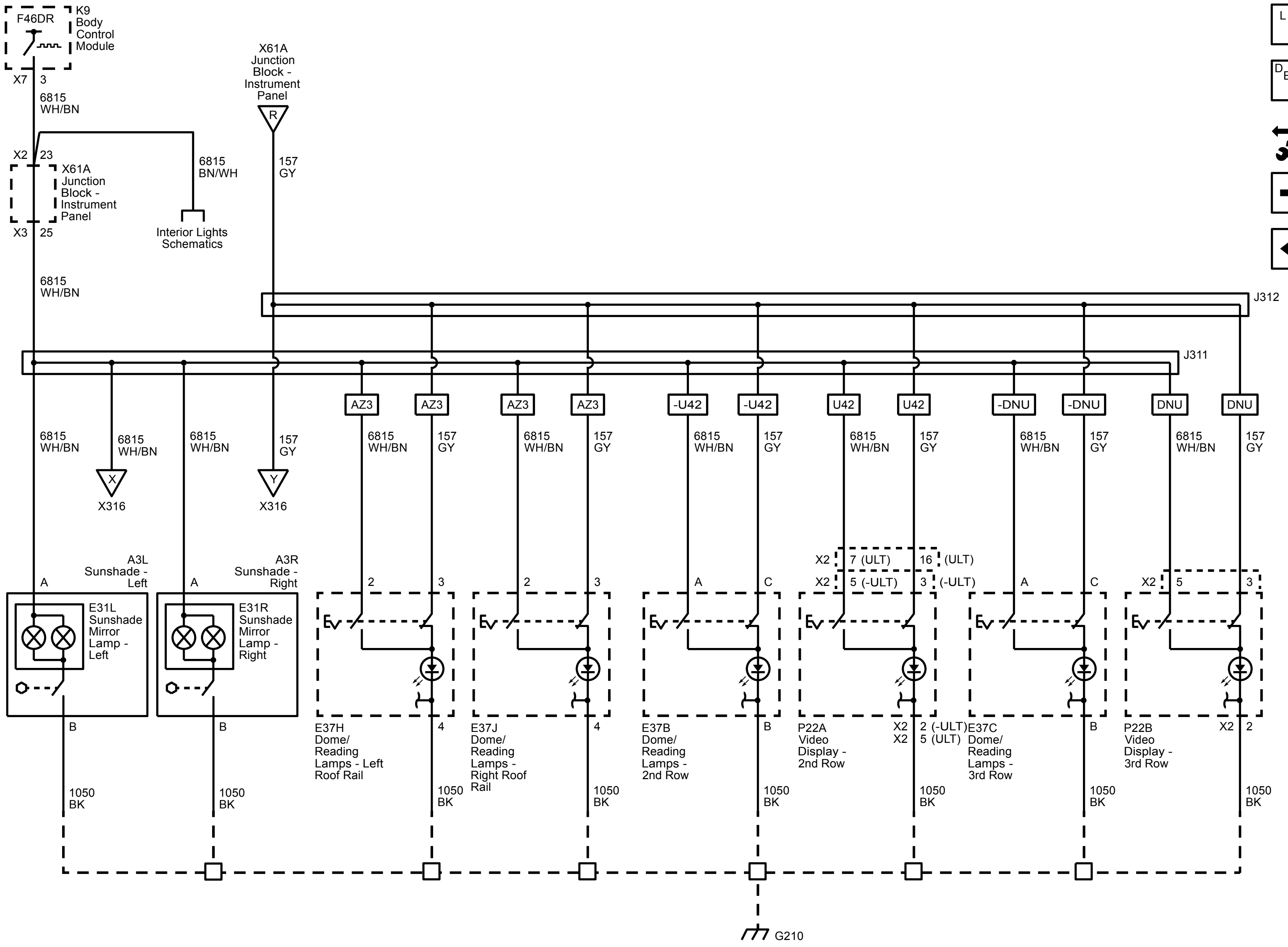

K9
Body
Control
Module
F46DR
X1 14
X7 19
X7 3
328
GY/GN
156
GY
Interior Lights
Schematics
6815
WH/BN
6815
WH/BN
X4 27
X2 30
X3 25
X61A
Junction
Block -
Instrument
Panel
X3 41
28
X2 23
D07-DCK
6815
WH/BN
X225 4
6815
WH/BN
328
GY/GN
156
GY
X316 5
6
X300 28
328
GY/GN
156
GY
6815
WH/BN
2
3
1
S12
Dome
Lamp
Switch
DOOR
OFF
ON
S5
Center
Console
Compartment
Lamp Switch
2
1
6815
WH/BN
1
E28
Center
Console
Compartment
Lamp
2
1050
BK
1050
BK
G210

Door Sill and D-Pillar Dome Lamps


F47DR
K9
Body
Control
Module
X7
1
157
GY
SWB-Z75
Z75/-SWB
J322
Z75
Z75
Z75
Z75
-SWB
157
GY
157
GY
157
GY
157
GY
157
GY
157
GY
157
GY
157
GY
X486
1
X2
29
X61A
Junction
Block -
Instrument
Panel
X3
29
157
GY
R
J312
1
1
1
1
157
GY
157
GY
157
GY
157
GY
157
GY
A
E8A
Door Sill
Plate
Lamp -
Driver
E8Q
Door Sill
Plate
Lamp -
Left Rear
E8B
Door Sill
Plate
Lamp -
Passenger
E8R
Door Sill
Plate Lamp
- Right
Rear
E36AH
Dome
Lamp
B
1150
BK
1150
BK
1250
BK
1250
BK
2
2
2
2
1150
BK
1150
BK
1250
BK
1250
BK
1450
BK
G311
G312
G325

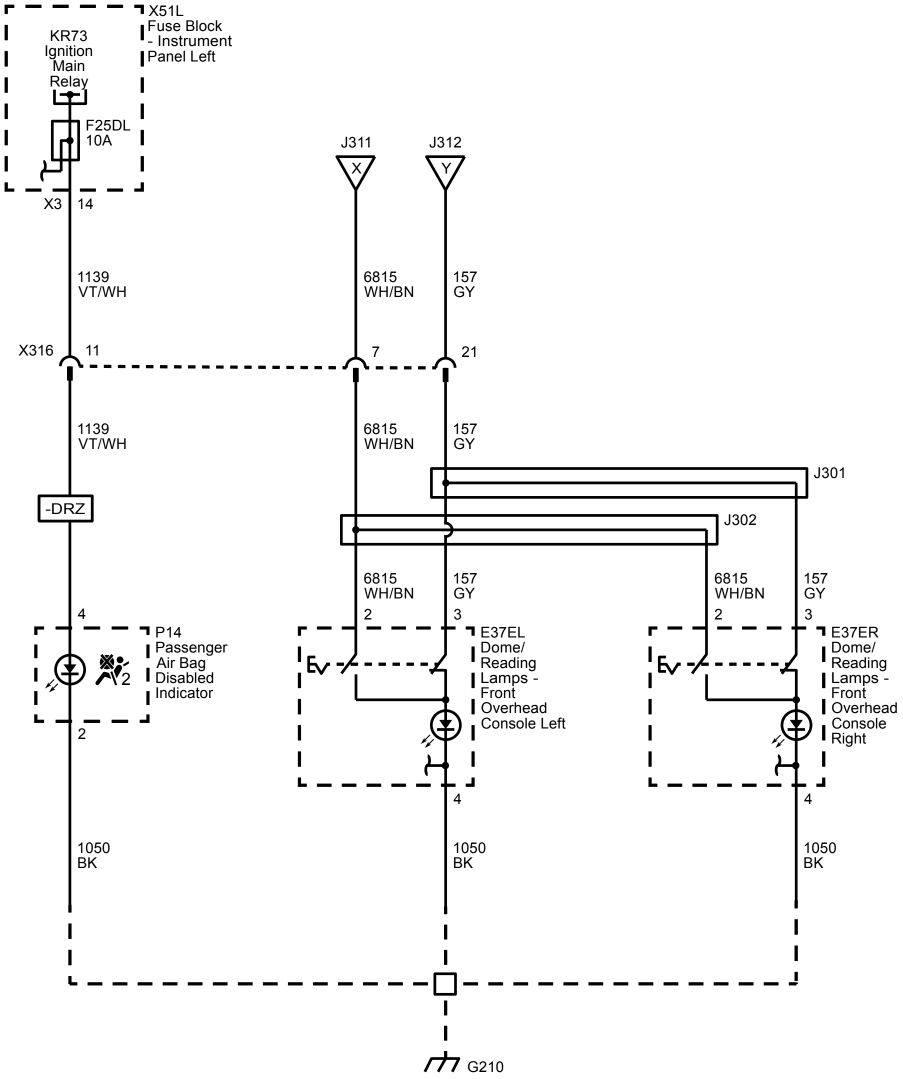
LOC
DESC

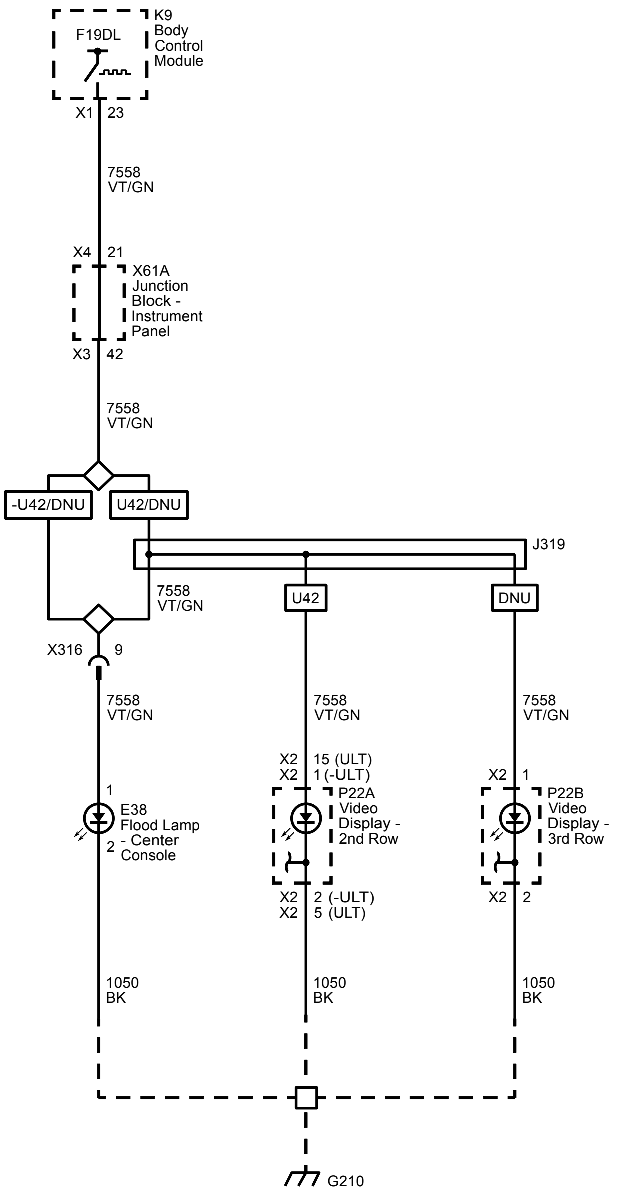
Overhead Lamps (1 of 2)

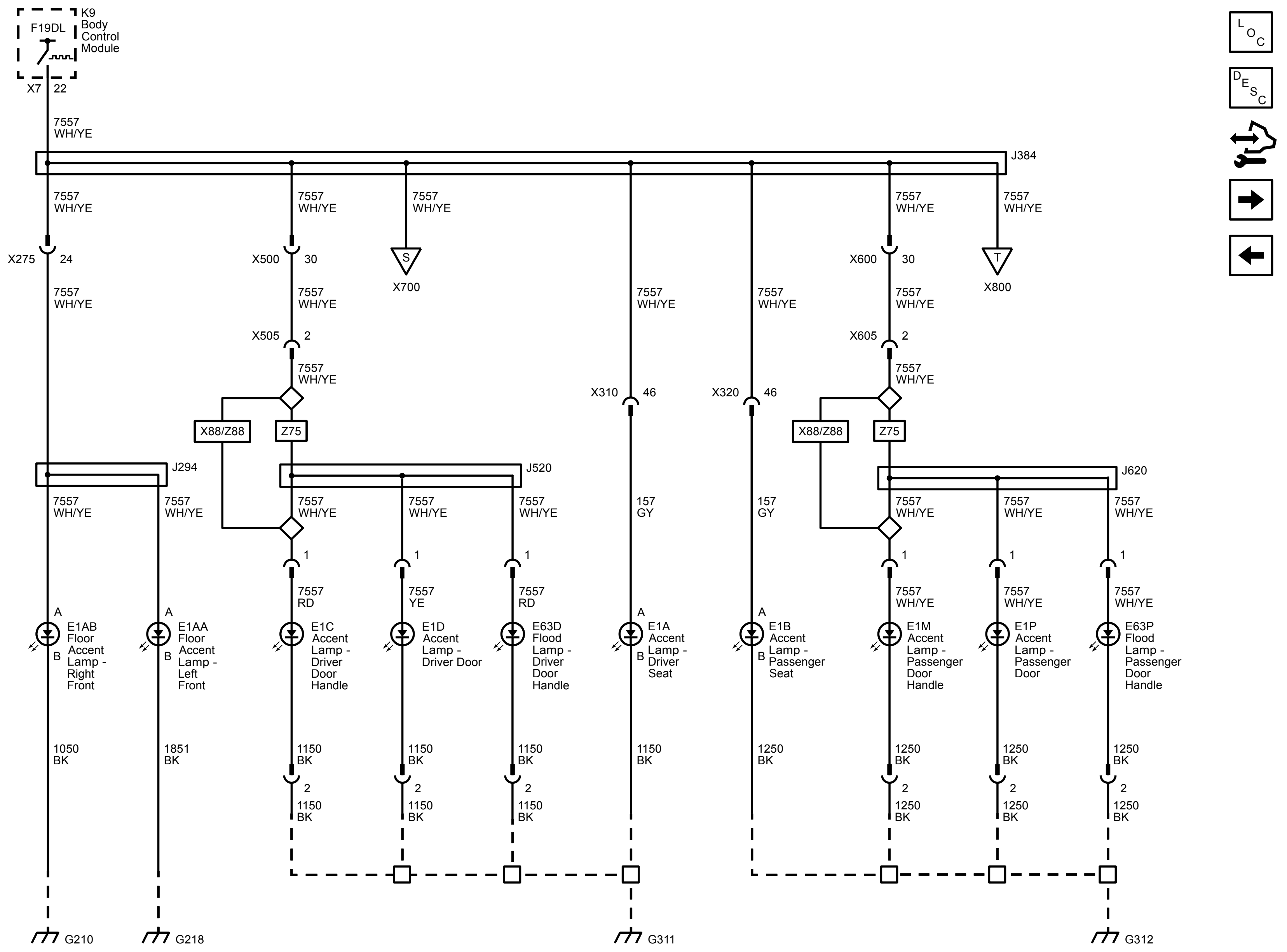

F46DR
K9
Body
Control
Module
X7 3
6815
WH/BN
X61A
Junction
Block -
Instrument
Panel
R
157
GY
X2 23
X61A
Junction
Block -
Instrument
Panel
6815
BN/WH
Interior Lights
Schematics
X3 25
6815
WH/BN
J312
J311
AZ3
AZ3
AZ3
AZ3
-U42
-U42
U42
U42
-DNU
-DNU
DNU
DNU
6815
WH/BN
6815
WH/BN
6815
WH/BN
157
GY
X
X316
Y
X316
6815
WH/BN
157
GY
6815
WH/BN
157
GY
6815
WH/BN
157
GY
6815
WH/BN
157
GY
6815
WH/BN
157
GY
6815
WH/BN
157
GY
A3L
Sunshade -
Left
A3R
Sunshade -
Right
A
A
E31L
Sunshade
Mirror
Lamp -
Left
E31R
Sunshade
Mirror
Lamp -
Right
2
3
2
3
A
C
X2 7 (ULT) 16 (ULT)
X2 5 (-ULT) 3 (-ULT)
A
C
X2 5 3
B
B
E37H
Dome/
Reading
Lamps - Left
Roof Rail
4
E37J
Dome/
Reading
Lamps -
Right Roof
Rail
4
E37B
Dome/
Reading
Lamps -
2nd Row
B
P22A
Video
Display -
2nd Row
X2 2 (-ULT)
X2 5 (ULT)
E37C
Dome/
Reading
Lamps -
3rd Row
B
P22B
Video
Display -
3rd Row
X2 2
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
G210

Overhead Lamps (2 of 2)

LOC
DESC

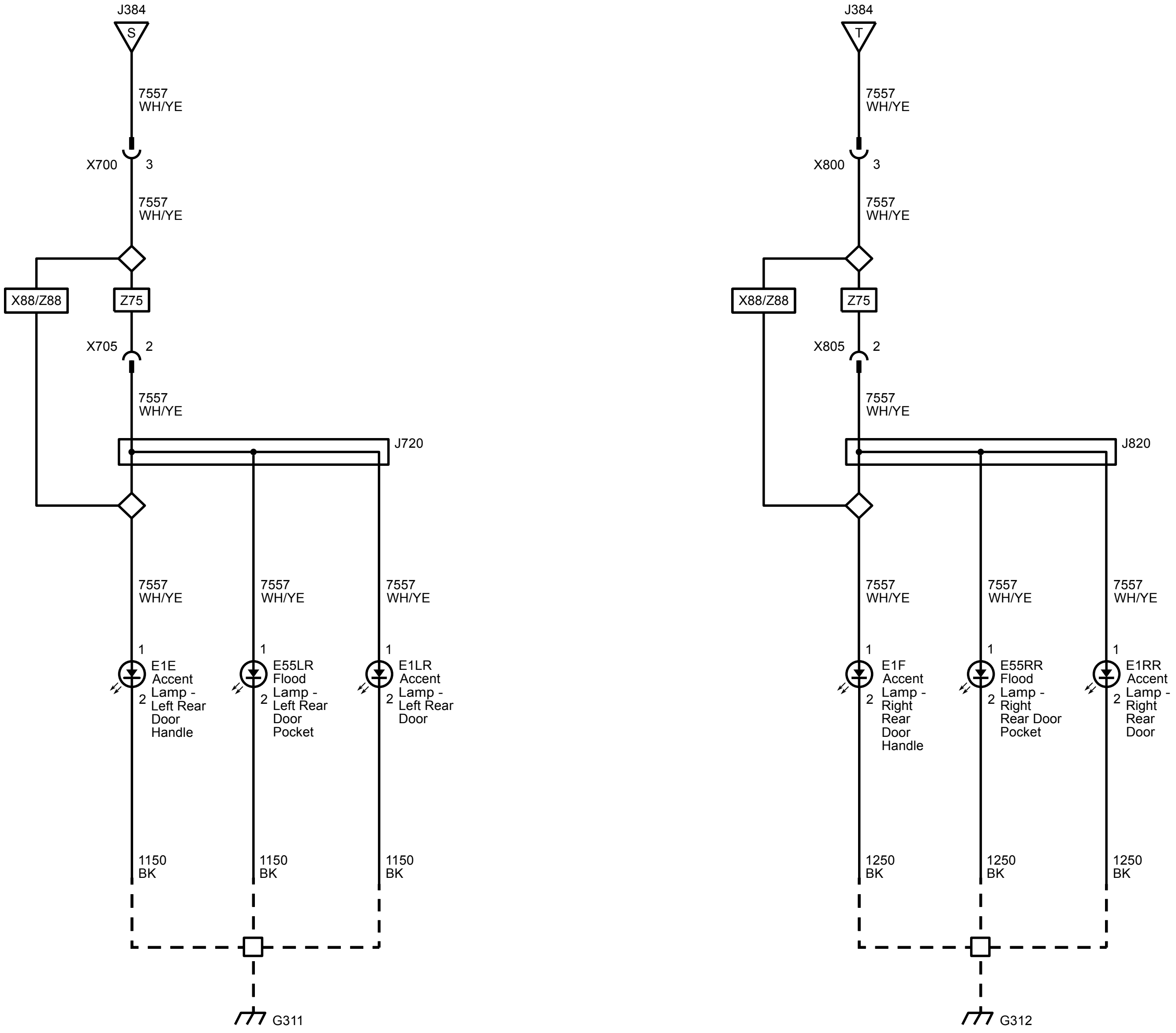

X51L
Fuse Block - Instrument Panel Left
KR73 Ignition Main Relay
F25DL
10A
X3
14
J311
X
J312
Y
1139
VT/WH
6815
WH/BN
157
GY
X316
11
7
21
1139
VT/WH
6815
WH/BN
157
GY
J301
J302
-DRZ
4
P14 Passenger Air Bag Disabled Indicator
2
6815
WH/BN
157
GY
2
3
E37EL Dome/ Reading Lamps - Front Overhead Console Left
4
6815
WH/BN
157
GY
2
3
E37ER Dome/ Reading Lamps - Front Overhead Console Right
4
1050
BK
1050
BK
1050
BK
G210


K9
Body
Control
Module
F19DL
X1
23
7558
VT/GN
X4
21
X61A
Junction
Block -
Instrument
Panel
X3
42
7558
VT/GN
-U42/DNU
U42/DNU
J319
7558
VT/GN
U42
DNU
X316
9
7558
VT/GN
7558
VT/GN
7558
VT/GN
X2
X2
15 (ULT)
1 (-ULT)
X2
1
1
E38
Flood Lamp
2
- Center
Console
P22A
Video
Display -
2nd Row
P22B
Video
Display -
3rd Row
X2
X2
2 (-ULT)
5 (ULT)
X2
2
1050
BK
1050
BK
1050
BK
G210


K9
Body
Control
Module
F19DL
X7
22
7557
WH/YE
J384
X275
24
X500
30
S
X700
X600
30
T
X800
X505
2
X605
2
X310
46
X320
46
X88/Z88
Z75
J294
J520
J620
157
GY
7557
RD
7557
YE
1
A
B
E1AB
Floor
Accent
Lamp -
Right
Front
E1AA
Floor
Accent
Lamp -
Left
Front
E1C
Accent
Lamp -
Driver
Door
Handle
E1D
Accent
Lamp -
Driver Door
E63D
Flood
Lamp -
Driver
Door
Handle
E1A
Accent
Lamp -
Driver
Seat
E1B
Accent
Lamp -
Passenger
Seat
E1M
Accent
Lamp -
Passenger
Door
Handle
E1P
Accent
Lamp -
Passenger
Door
E63P
Flood
Lamp -
Passenger
Door
Handle
1050
BK
1851
BK
1150
BK
1250
BK
2
G210
G218
G311
G312
L O C
D E S C

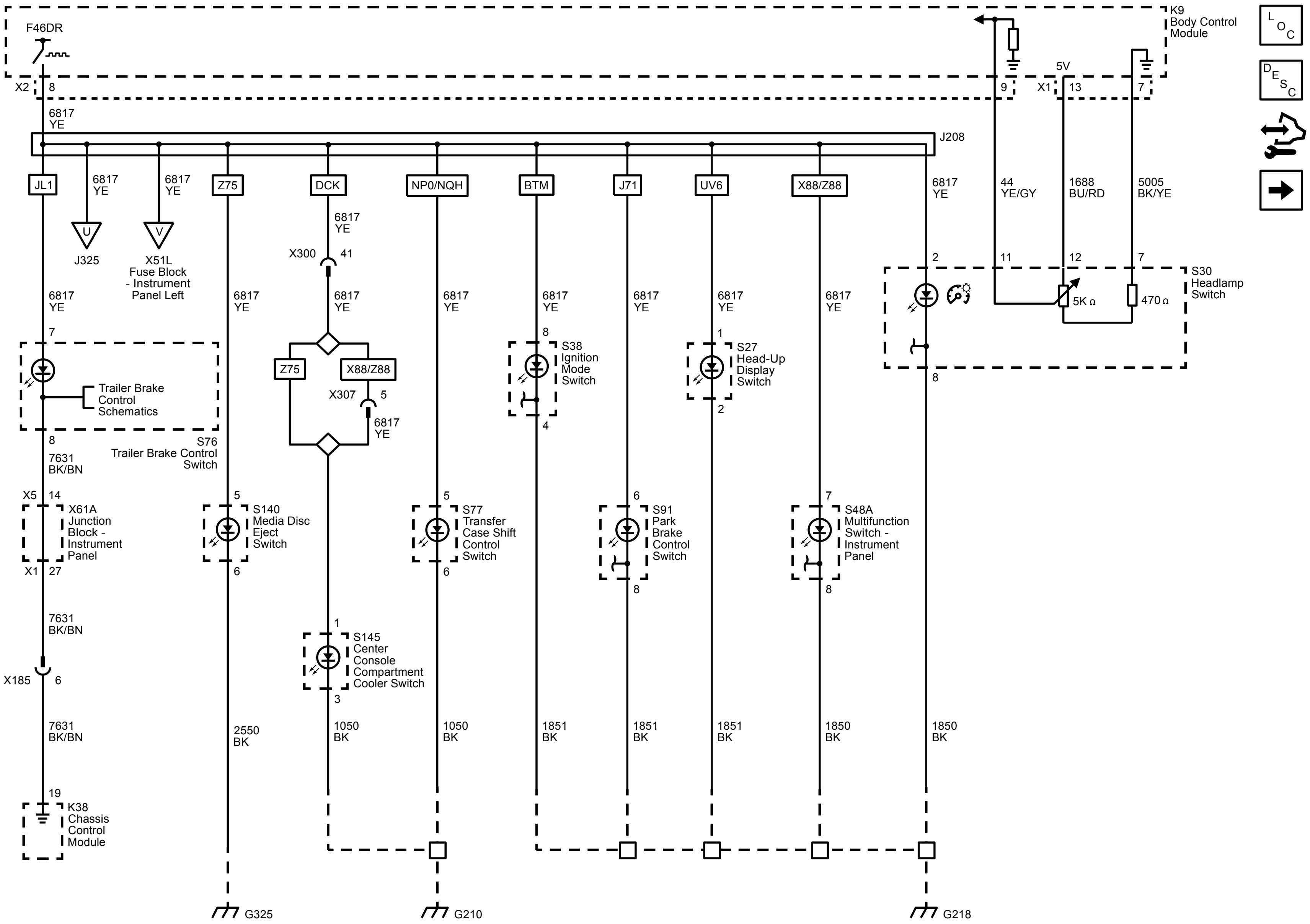
Accent and Flood Lamps - Rear Doors

LOC
DESC


J384
S
7557
WH/YE
X700
3
7557
WH/YE
X88/Z88
Z75
X705
2
7557
WH/YE
J720
7557
WH/YE
7557
WH/YE
7557
WH/YE
1
E1E
Accent
Lamp -
Left Rear
Door
Handle
2
1
E55LR
Flood
Lamp -
Left Rear
Door
Pocket
2
1
E1LR
Accent
Lamp -
Left Rear
Door
2
1150
BK
1150
BK
1150
BK
G311
J384
T
7557
WH/YE
X800
3
7557
WH/YE
X88/Z88
Z75
X805
2
7557
WH/YE
J820
7557
WH/YE
7557
WH/YE
7557
WH/YE
1
E1F
Accent
Lamp -
Right
Rear
Door
Handle
2
1
E55RR
Flood
Lamp -
Right
Rear Door
Pocket
2
1
E1RR
Accent
Lamp -
Right
Rear
Door
2
1250
BK
1250
BK
1250
BK
G312

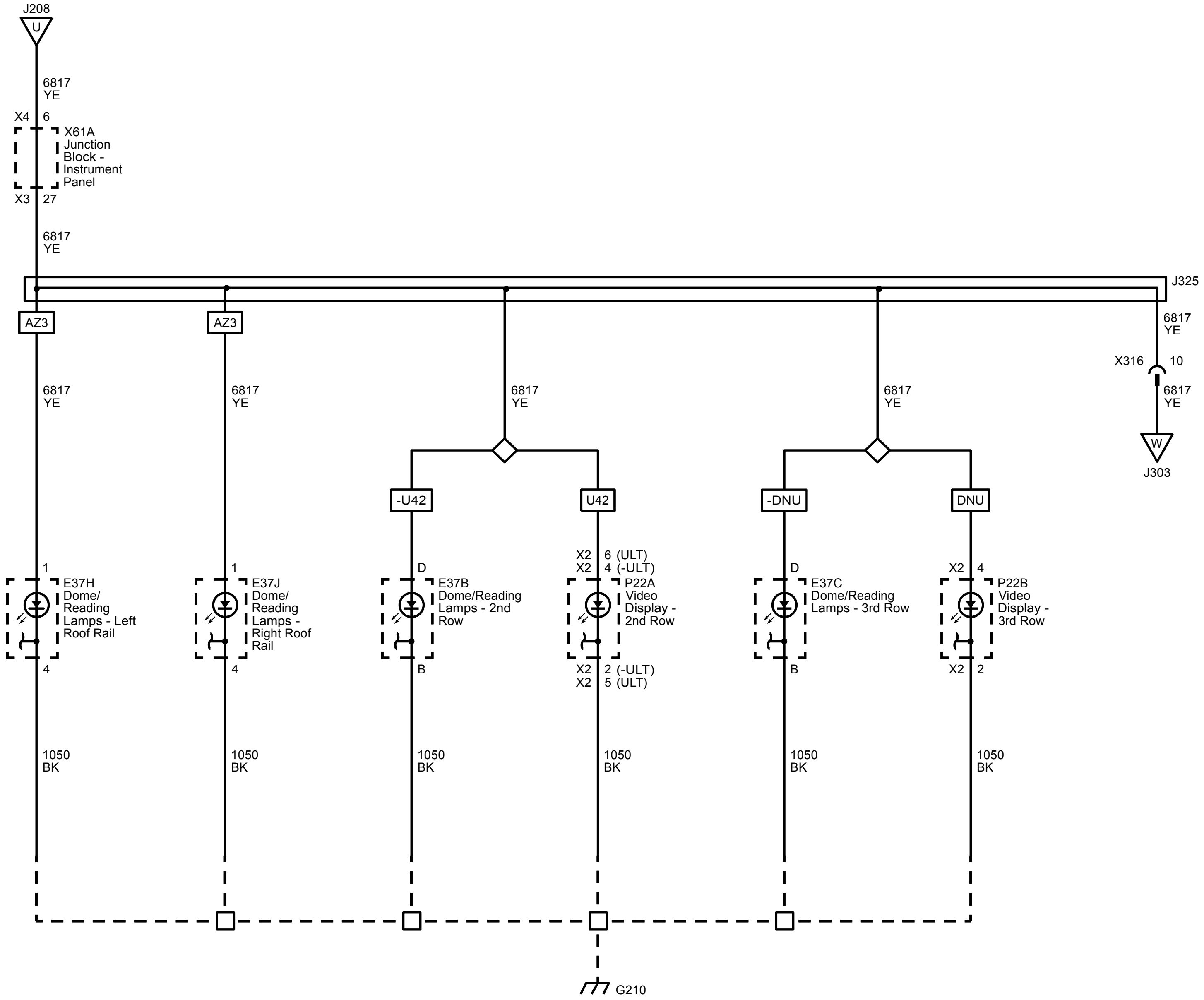
Interior Lights Dimming Schematics

Instrument Panel and Floor Console Dimming


F46DR
X2
8
6817
YE
K9
Body Control
Module
9
X1
13
7
5V
J208
JL1
6817
YE
U
J325
6817
YE
V
X51L
Fuse Block
- Instrument
Panel Left
Z75
DCK
6817
YE
X300
41
NP0/NQH
BTM
J71
UV6
X88/Z88
6817
YE
44
YE/GY
1688
BU/RD
5005
BK/YE
6817
YE
7
Trailer Brake
Control
Schematics
8
7631
BK/BN
S76
Trailer Brake Control
Switch
6817
YE
Z75
X88/Z88
X307
5
6817
YE
6817
YE
6817
YE
8
S38
Ignition
Mode
Switch
4
6817
YE
6817
YE
1
S27
Head-Up
Display
Switch
2
6817
YE
2
11
12
7
S30
Headlamp
Switch
5K Ω
470 Ω
8
X5
14
X61A
Junction
Block -
Instrument
Panel
X1
27
5
S140
Media Disc
Eject
Switch
6
5
S77
Transfer
Case Shift
Control
Switch
6
6
S91
Park
Brake
Control
Switch
8
7
S48A
Multifunction
Switch -
Instrument
Panel
8
7631
BK/BN
1
S145
Center
Console
Compartment
Cooler Switch
3
X185
6
7631
BK/BN
2550
BK
1050
BK
1050
BK
1851
BK
1851
BK
1851
BK
1850
BK
1850
BK
19
K38
Chassis
Control
Module
G325
G210
G218
L O C
D E S C

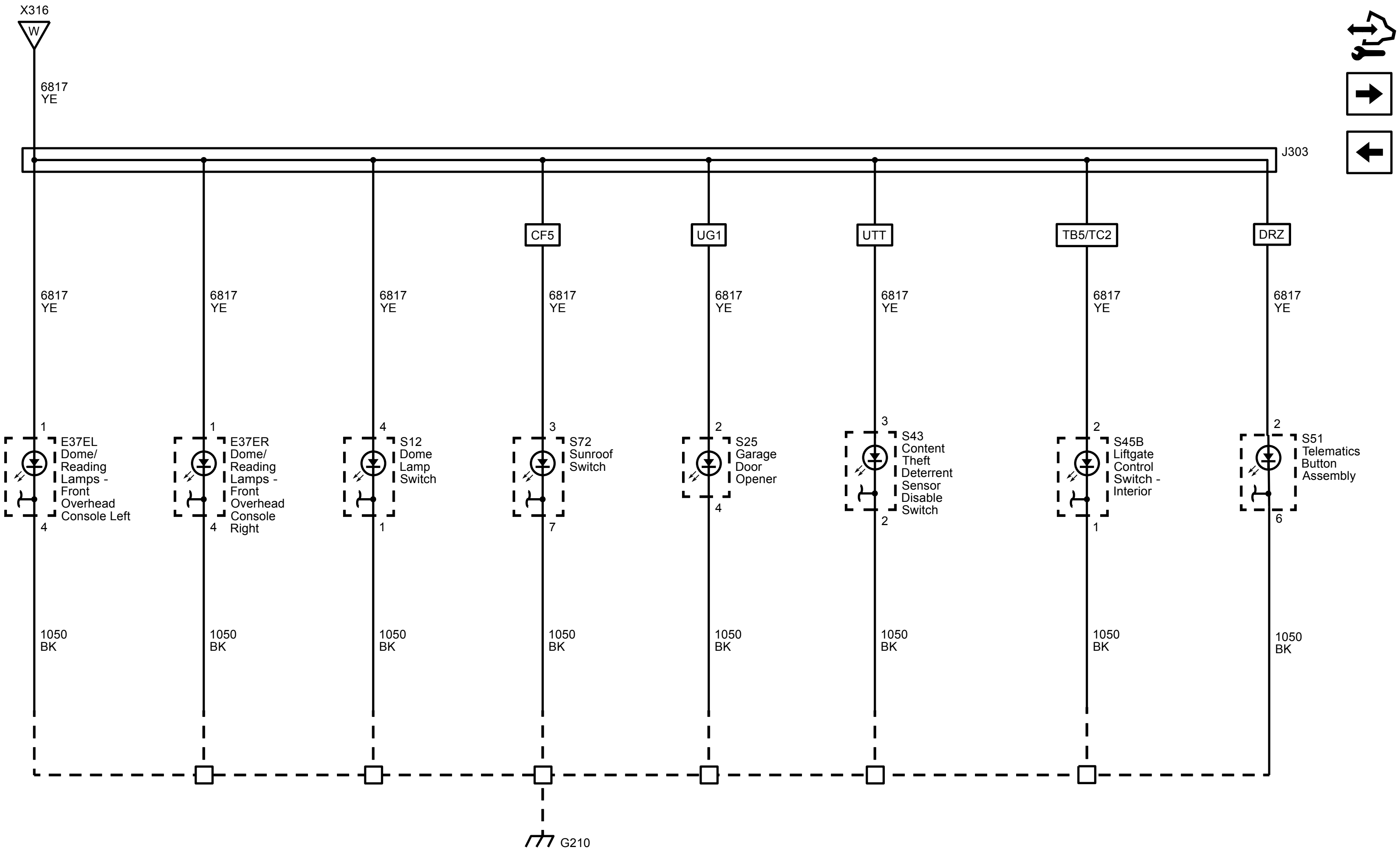
Headliner and Overhead Console Dimming (1 of 2)

LOC
DESC

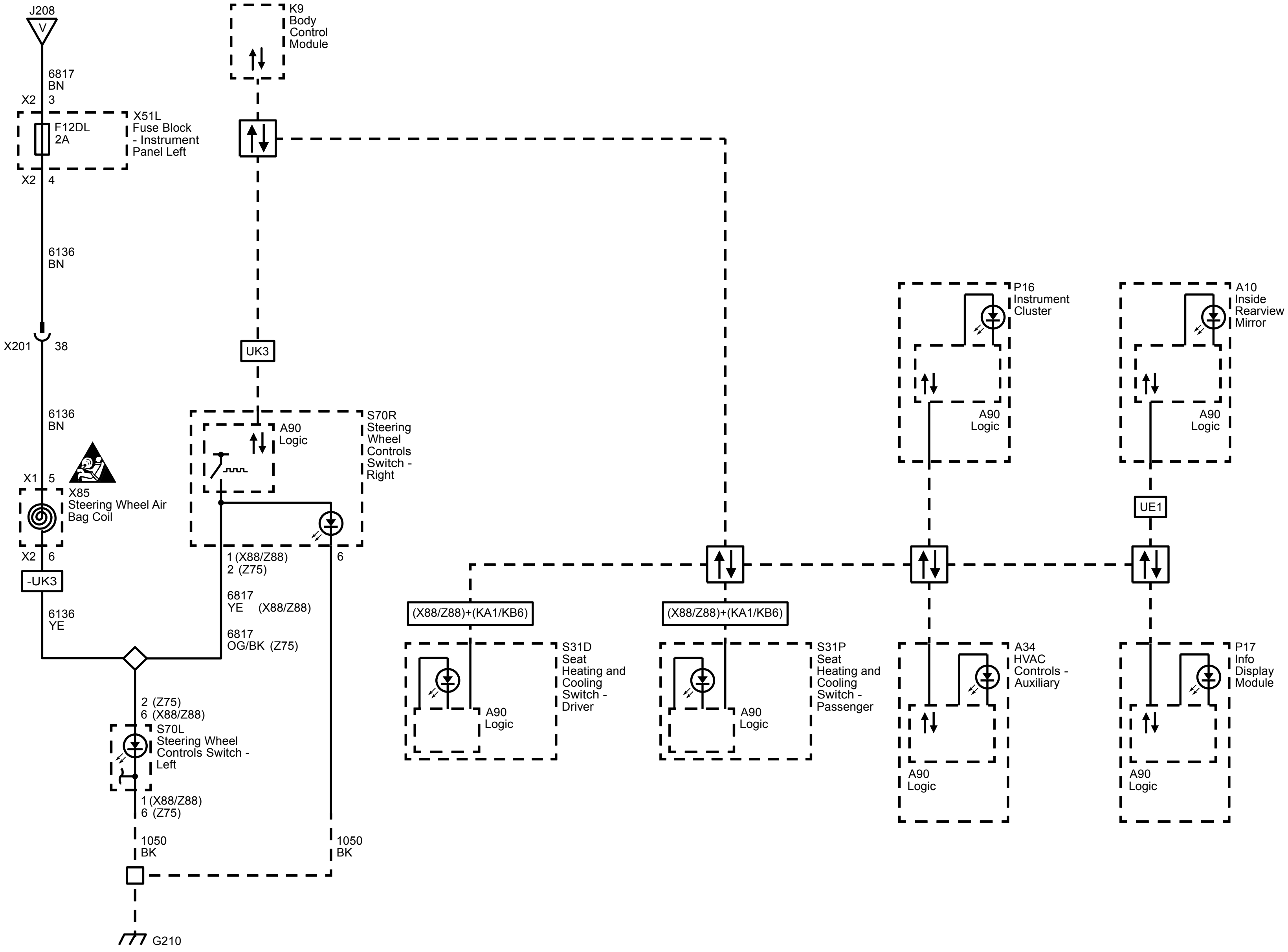

J208
U
6817
YE
X4
6
X61A
Junction
Block -
Instrument
Panel
X3
27
6817
YE
J325
AZ3
AZ3
6817
YE
6817
YE
6817
YE
6817
YE
6817
YE
X316
10
6817
YE
W
J303
-U42
U42
-DNU
DNU
1
E37H
Dome/
Reading
Lamps - Left
Roof Rail
4
1
E37J
Dome/
Reading
Lamps -
Right Roof
Rail
4
D
E37B
Dome/Reading
Lamps - 2nd
Row
B
X2
6 (ULT)
X2
4 (-ULT)
P22A
Video
Display -
2nd Row
X2
2 (-ULT)
X2
5 (ULT)
D
E37C
Dome/Reading
Lamps - 3rd Row
B
X2
4
P22B
Video
Display -
3rd Row
X2
2
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
G210

Headliner and Overhead Console Dimming (2 of 2)

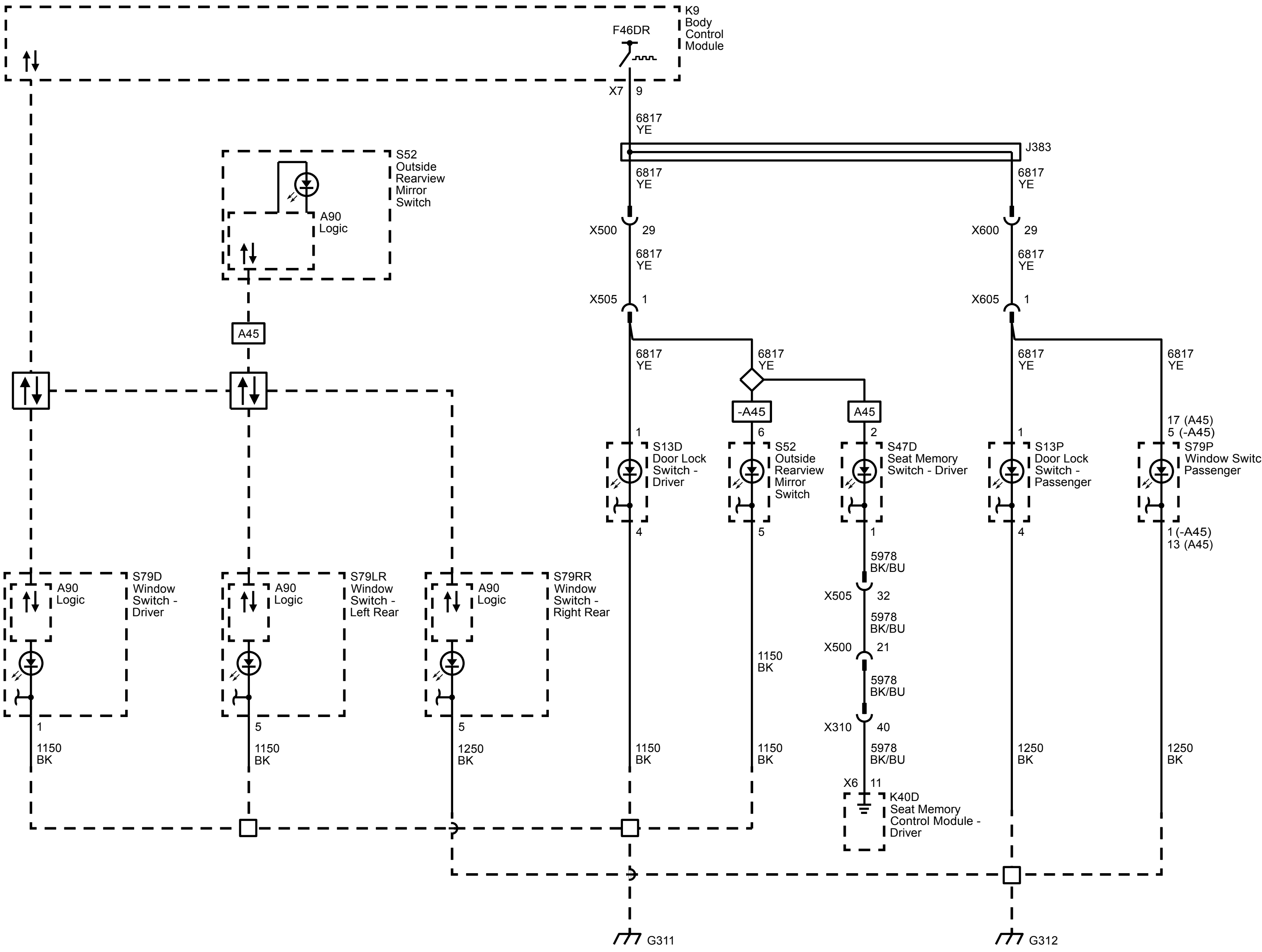
LOC
DESC


X316
W
6817
YE
J303
CF5
UG1
UTT
TB5/TC2
DRZ
6817
YE
6817
YE
6817
YE
6817
YE
6817
YE
6817
YE
6817
YE
6817
YE
1
E37EL
Dome/
Reading
Lamps -
Front
Overhead
Console Left
4
1
E37ER
Dome/
Reading
Lamps -
Front
Overhead
Console
Right
4
4
S12
Dome
Lamp
Switch
1
3
S72
Sunroof
Switch
7
2
S25
Garage
Door
Opener
4
3
S43
Content
Theft
Deterrent
Sensor
Disable
Switch
2
2
S45B
Liftgate
Control
Switch -
Interior
1
2
S51
Telematics
Button
Assembly
6
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
1050
BK
G210

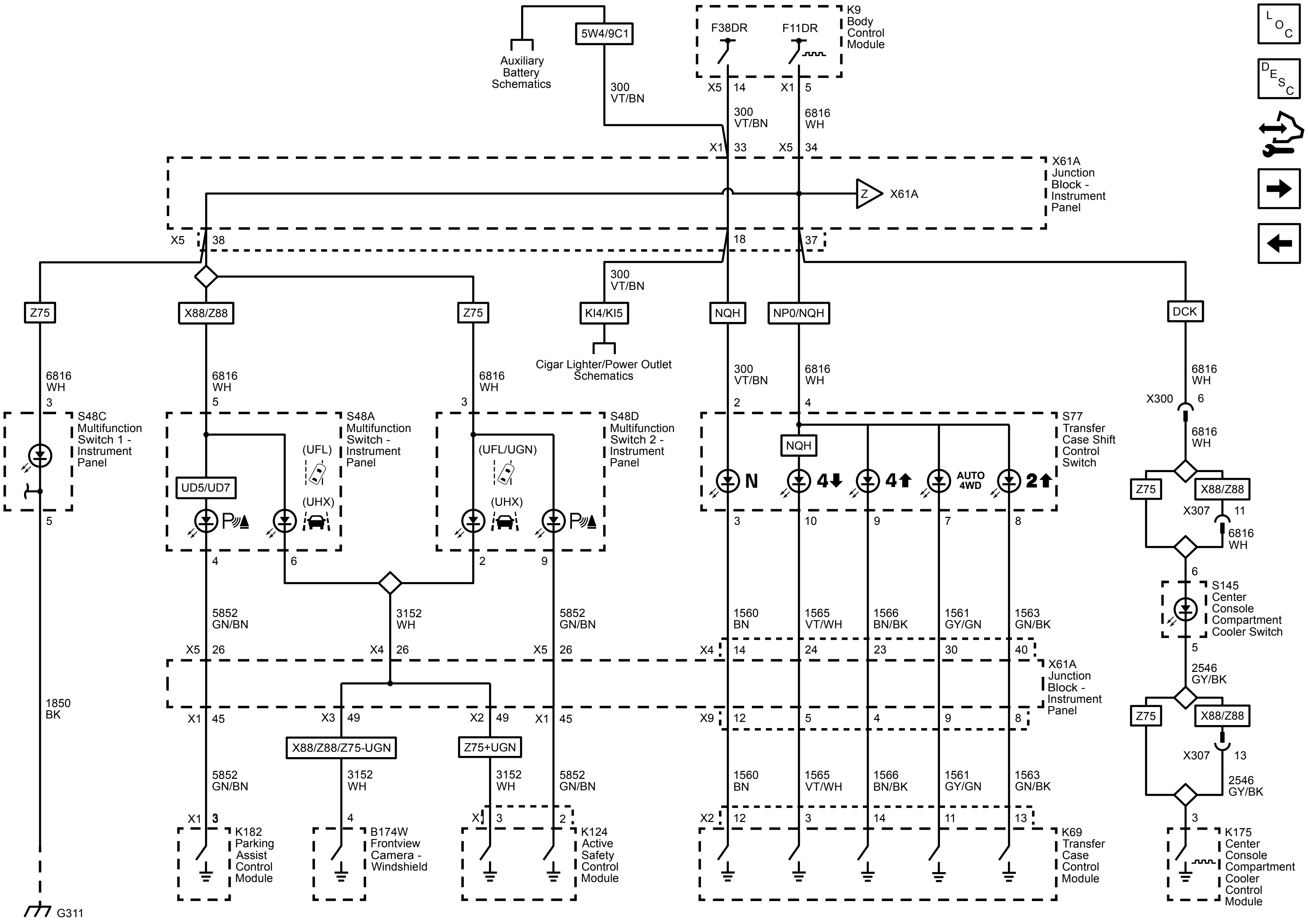
Steering Wheel and Control Dimming


J208
V
6817
BN
X2 3
F12DL
2A
X51L
Fuse Block
- Instrument
Panel Left
X2 4
6136
BN
X201 38
6136
BN
X1 5
X85
Steering Wheel Air
Bag Coil
X2 6
-UK3
6136
YE
K9
Body
Control
Module
UK3
A90
Logic
S70R
Steering
Wheel
Controls
Switch -
Right
1 (X88/Z88)
2 (Z75)
6
6817
YE (X88/Z88)
6817
OG/BK (Z75)
2 (Z75)
6 (X88/Z88)
S70L
Steering Wheel
Controls Switch -
Left
1 (X88/Z88)
6 (Z75)
1050
BK
1050
BK
G210
(X88/Z88)+(KA1/KB6)
S31D
Seat
Heating and
Cooling
Switch -
Driver
A90
Logic
(X88/Z88)+(KA1/KB6)
S31P
Seat
Heating and
Cooling
Switch -
Passenger
A90
Logic
P16
Instrument
Cluster
A90
Logic
A10
Inside
Rearview
Mirror
A90
Logic
UE1
A34
HVAC
Controls -
Auxiliary
A90
Logic
P17
Info
Display
Module
A90
Logic

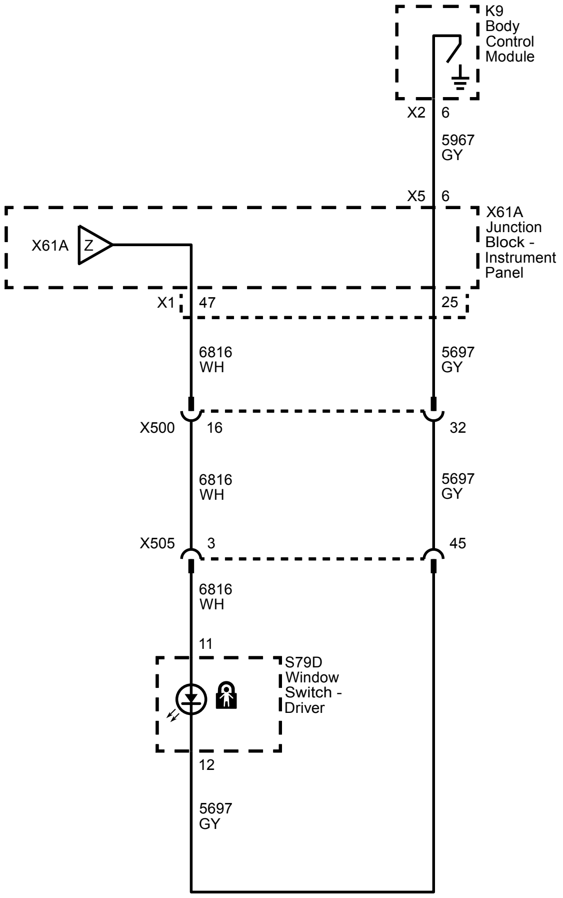
Door Locks, Windows and Mirror Switch Dimming


K9
Body
Control
Module
F46DR
X7
9
6817
YE
J383
6817
YE
6817
YE
X500
29
X600
29
6817
YE
6817
YE
X505
1
X605
1
6817
YE
6817
YE
6817
YE
6817
YE
S52
Outside
Rearview
Mirror
Switch
A90
Logic
A45
-A45
A45
1
S13D
Door Lock
Switch -
Driver
6
S52
Outside
Rearview
Mirror
Switch
2
S47D
Seat Memory
Switch - Driver
1
S13P
Door Lock
Switch -
Passenger
17 (A45)
5 (-A45)
S79P
Window Switch -
Passenger
4
5
1
4
1 (-A45)
13 (A45)
5978
BK/BU
X505
32
5978
BK/BU
X500
21
5978
BK/BU
X310
40
5978
BK/BU
X6
11
K40D
Seat Memory
Control Module -
Driver
A90
Logic
S79D
Window
Switch -
Driver
A90
Logic
S79LR
Window
Switch -
Left Rear
A90
Logic
S79RR
Window
Switch -
Right Rear
1
5
5
1150
BK
1150
BK
1250
BK
1150
BK
1150
BK
1150
BK
1250
BK
1250
BK
G311
G312

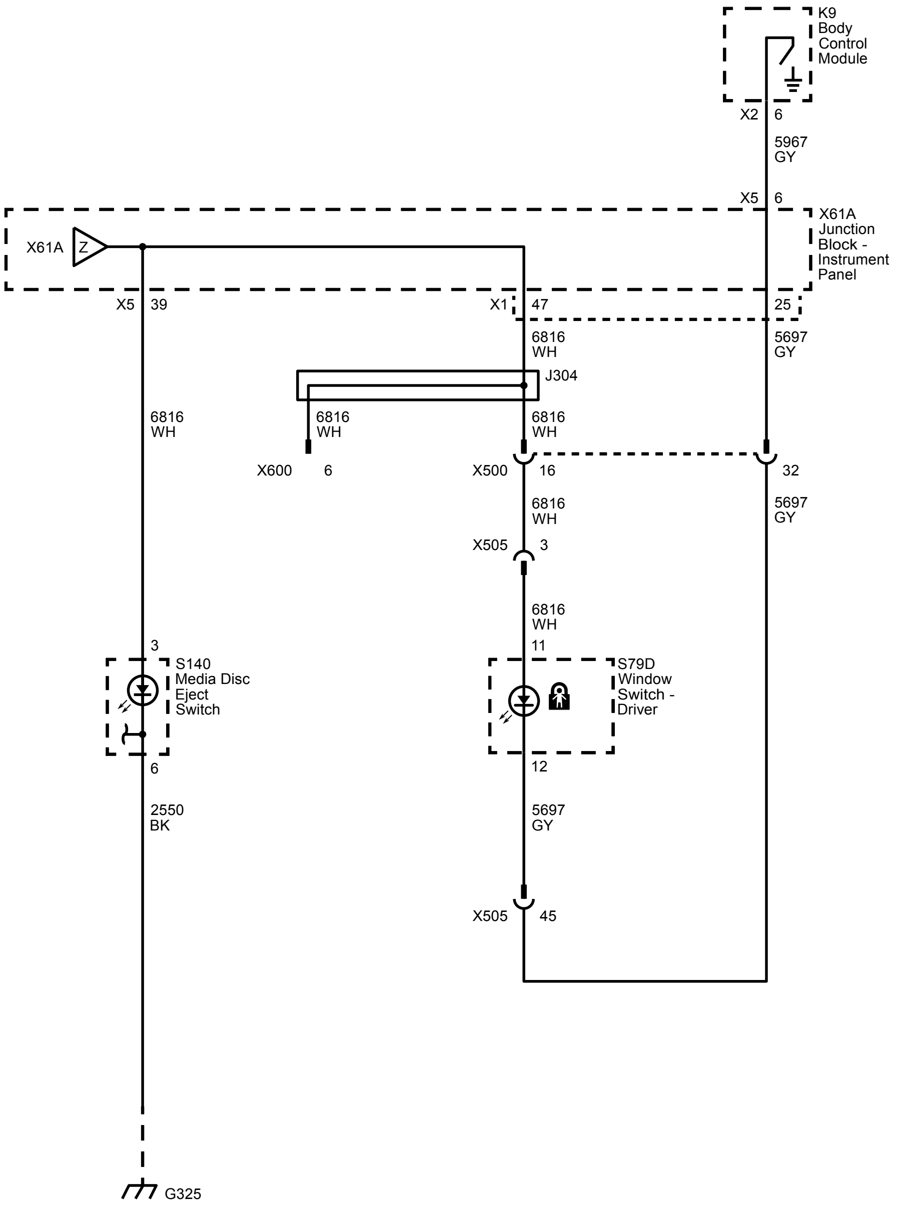
Indicators Lamps (1 of 3)


Auxiliary Battery Schematics
5W4/9C1
300 VT/BN
F38DR
F11DR
K9 Body Control Module
X5 14
X1 5
300 VT/BN
6816 WH
X1 33
X5 34
X61A Junction Block - Instrument Panel
Z
X61A
X5 38
18
37
300 VT/BN
Z75
X88/Z88
Z75
KI4/KI5
NQH
NP0/NQH
DCK
Cigar Lighter/Power Outlet Schematics
6816 WH
3
S48C Multifunction Switch 1 - Instrument Panel
5
1850 BK
G311
6816 WH
5
S48A Multifunction Switch - Instrument Panel
UD5/UD7
(UFL)
(UHX)
4
6
6816 WH
3
S48D Multifunction Switch 2 - Instrument Panel
(UFL/UGN)
(UHX)
2
9
300 VT/BN
2
6816 WH
4
NQH
S77 Transfer Case Shift Control Switch
N
4
4
AUTO 4WD
2
3
10
9
7
8
6816 WH
X300 6
6816 WH
Z75
X88/Z88
X307 11
6816 WH
6
S145 Center Console Compartment Cooler Switch
5
2546 GY/BK
Z75
X88/Z88
X307 13
2546 GY/BK
3
5852 GN/BN
3152 WH
5852 GN/BN
1560 BN
1565 VT/WH
1566 BN/BK
1561 GY/GN
1563 GN/BK
X5 26
X4 26
X5 26
X4 14
24
23
30
40
X61A Junction Block - Instrument Panel
X1 45
X3 49
X2 49
X1 45
X9 12
5
4
9
8
X88/Z88/Z75-UGN
Z75+UGN
5852 GN/BN
3152 WH
3152 WH
5852 GN/BN
1560 BN
1565 VT/WH
1566 BN/BK
1561 GY/GN
1563 GN/BK
X1 3
K182 Parking Assist Control Module
4
B174W Frontview Camera - Windshield
X1 3
2
K124 Active Safety Control Module
X2 12
3
14
11
13
K69 Transfer Case Control Module
K175 Center Console Compartment Cooler Control Module
LOC
DESC

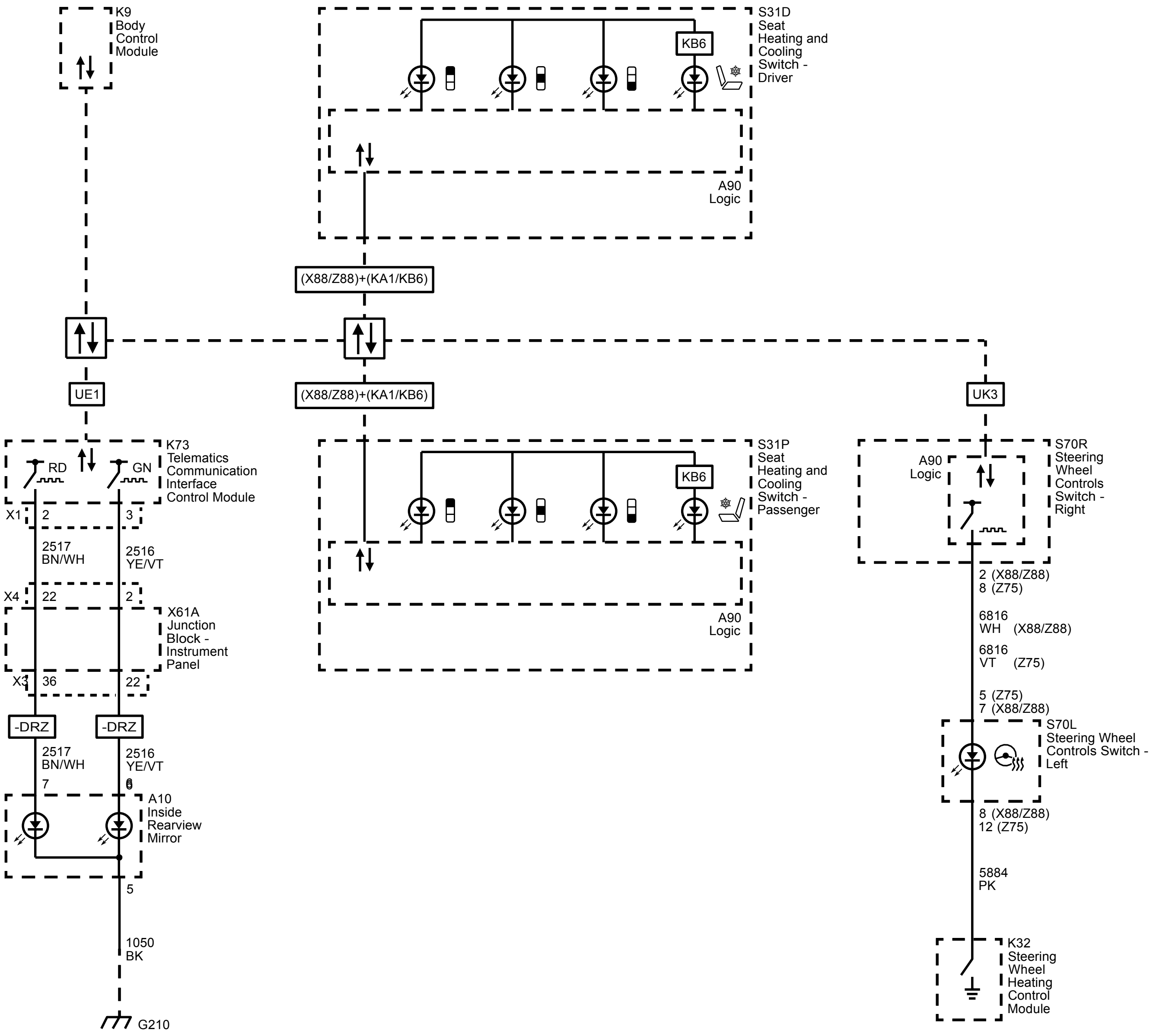
Indicators Lamps (2 of 3) (X88 or Z88)


K9
Body
Control
Module
X2
6
5967
GY
X5
6
X61A
Junction
Block -
Instrument
Panel
X61A
Z
X1
47
25
6816
WH
5697
GY
X500
16
32
6816
WH
5697
GY
X505
3
45
6816
WH
11
S79D
Window
Switch -
Driver
12
5697
GY

Indicators Lamps (2 of 3) (Z75)


K9
Body
Control
Module
X2
6
5967
GY
X5
6
X61A
Junction
Block -
Instrument
Panel
X61A
Z
X5
39
X1
47
25
6816
WH
5697
GY
J304
6816
WH
6816
WH
6816
WH
X600
6
X500
16
32
6816
WH
5697
GY
X505
3
6816
WH
3
11
S140
Media Disc
Eject
Switch
S79D
Window
Switch -
Driver
6
12
2550
BK
5697
GY
X505
45
G325

Indicators Lamps (3 of 3)


K9
Body
Control
Module
S31D
Seat
Heating and
Cooling
Switch -
Driver
KB6
A90
Logic
(X88/Z88)+(KA1/KB6)
(X88/Z88)+(KA1/KB6)
UE1
UK3
K73
Telematics
Communication
Interface
Control Module
RD
GN
X1
2
3
2517
BN/WH
2516
YE/VT
X4
22
2
X61A
Junction
Block -
Instrument
Panel
X3
36
22
-DRZ
-DRZ
2517
BN/WH
2516
YE/VT
7
6
A10
Inside
Rearview
Mirror
5
1050
BK
G210
S31P
Seat
Heating and
Cooling
Switch -
Passenger
KB6
A90
Logic
A90
Logic
S70R
Steering
Wheel
Controls
Switch -
Right
2 (X88/Z88)
8 (Z75)
6816
WH (X88/Z88)
6816
VT (Z75)
5 (Z75)
7 (X88/Z88)
S70L
Steering Wheel
Controls Switch -
Left
8 (X88/Z88)
12 (Z75)
5884
PK
K32
Steering
Wheel
Heating
Control
Module

Description and Operation

Exterior Lighting Systems Description and Operation

The exterior lighting system consist of the following lamps:

- Automatic high beam assist
- Backup lamps
- Cornering lamps (Z75)
- Daytime running lamps
- Hazard warning lamps
- Headlamps
- Park, tail, license, and marker lamps
- Stop lamps
- Turn signal lamps

Low Beam Headlamps

The headlamps may be turned ON in 3 different ways:

- When the headlamp switch is placed in the ON position, for normal operation
- When the headlamp switch is placed in the AUTO position, for automatic lamp control
- When the headlamp switch is placed in the AUTO position, with the windshield wipers ON in daylight conditions, after a 6 second delay

The BCM will also command the low beam headlamps ON during daylight conditions when the following conditions are met:

- Headlamp switch in the AUTO position
- Windshield wipers ON
- Vehicle in any gear but PARK

When the BCM commands the low beam headlamps ON, the vehicle operator will notice the interior backlighting for the instrument cluster and the various switches with backlighting control will dim to the level of brightness selected by the instrument panel dimmer switch.

Low Beam Headlamps (without T4F)

The body control module (BCM) monitors three signal circuits from the headlamp switch. When the headlamp switch is in the AUTO position, all three signal circuits are open. When placed in the AUTO position, the BCM monitors inputs from the ambient light sensor to determine if headlamps are required or if daytime running lamps will be activated based on outside lighting conditions. When the headlamp switch is placed in the OFF position, the headlamp switch headlamps OFF signal circuit is grounded, indicating to the BCM that the exterior lamps should be turned OFF. With the headlamp switch in the PARK position, the headlamp switch park lamps ON signal circuit is grounded, indicating that the park lamps have been requested. When the headlamp switch is placed in the HEADLAMP position, both the headlamp switch park lamps ON signal circuit and the headlamp switch headlamps ON signal circuit are grounded. The BCM responds to the inputs by illuminating the park lamps and headlamps. When the low beam headlamps are requested, the BCM applies B+ to both low beam headlamp control circuits illuminating the low beam headlamps.

Low Beam Headlamps (with Z75)

The body control module (BCM) monitors three signal circuits from the headlamp switch. When the headlamp switch is in the AUTO position, all three signal circuits are open. When placed in the AUTO position, the BCM monitors inputs from the ambient light sensor to determine if headlamps are required or if daytime running lamps will be activated based on outside lighting conditions. When the headlamp switch is placed in the OFF position, the headlamp switch headlamps OFF signal circuit is grounded, indicating to the BCM that the exterior lamps should be turned OFF. With the headlamp switch in the PARK position, the headlamp switch park lamps ON signal circuit is grounded, indicating that the park lamps have been requested. When the headlamp switch is placed in the HEADLAMP position, both the headlamp switch park lamps ON signal circuit and the headlamp switch headlamps ON signal circuit are grounded. The BCM responds to the inputs by illuminating the park lamps and headlamps. When the low beam headlamps are requested, the BCM applies B+ to both low beam headlamp control circuits to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly. The multifunction LED control modules respond the to the B+ input from the BCM by illuminating the left and right low beam LED headlamps.

Low Beam Headlamps (with T4F)

Warning: The high intensity discharge system produces high voltage and current. To reduce the risk of severe shocks and burns:

- **Never open the high intensity discharge system ballast or the arc tube assembly starter.**
- **Never probe between the high intensity discharge system ballast output connector and the arc tube assembly.**

The body control module (BCM) monitors three signal circuits from the headlamp switch. When the headlamp switch is in the AUTO position, all three signal circuits are open. When placed in the AUTO position, the BCM monitors inputs from the ambient light sensor to determine if headlamps are required or if daytime running lamps will be activated based on outside lighting conditions. When the headlamp switch is placed in the OFF position, the headlamp switch headlamps OFF signal circuit is grounded, indicating to the BCM that the exterior lamps should be turned OFF. With the headlamp switch in the PARK position, the headlamp switch park lamps ON signal circuit is grounded, indicating that the park lamps have been requested. When the headlamp switch is placed in the HEADLAMP position, both the headlamp switch park lamps ON signal circuit and the headlamp switch headlamps ON signal circuit are grounded. The BCM responds to the low beam request by applying ground to the low beam relay control circuit which energizes the low beam relay. With the low beam relay energized, the switch contacts close allowing battery voltage to flow through the low beam fuses. Battery voltage is then applied from the fuses, through the low beam control circuits to the left and right headlamp ballast located in each headlamp assembly. When battery voltage is applied to the headlamp ballast through the low beam control circuits, the ballast charge the starter to start the lamp. High intensity discharge (HID) headlamps do not have filaments like traditional bulbs, instead the starter uses a high voltage transformer to convert the input voltage into a higher voltage. This increased voltage is used in order to create an arc between the electrodes in the bulb.

Run Up Of The Lamp

Each ballast requires higher amperage in order to ensure normal startup and run up of the lamp. Run up is the term used to describe the extra power level given to the bulb. The input current during the steady state operation is lower that the start up amperage. After the lamp receives the strike from the starter and the arc is established, the ballast uses its operating voltage in order to provide the run up power needed in order to keep the lamp on. The lamp rapidly increases in intensity from a dim glow to a very high-intensity, bright light called a steady state. Within a few seconds of the arc being established in the bulb, the majority of steady state is complete. 100 percent of the steady state is completed shortly there after. A high watt power level is necessary in order to bring the lamp to a steady state in such a short period of time. The high watt power level allows the lamp to meet the SAE light vs. time specification.

When To Change The HID Bulb

Bulb failure, end of life occurs when the bulb gets old and becomes unstable. The bulb may begin shutting itself off sporadically and unpredictably at first, perhaps only once during a 24 hour period. When the bulb begins shutting itself off occasionally, the ballast will automatically turn the bulb back on again within 0.5 seconds. The ballast will re-strike the bulb so quickly that the bulb may not appear to have shut off. As the bulb ages, the bulb may begin to shut off more frequently, eventually over 30 times per minute. When the bulb begins to shut off more frequently, the ballast receives excessive, repetitive current input . Repetitive and excessive restarts or re-strikes, without time for the ballast to cool down, will permanently damage the ballast. As a safeguard, when repetitive re-strikes are detected, the ballast will not attempt to re-strike the lamp. The ballast then shuts down and the bulb goes out.

The following symptoms are noticeable signs of bulb failure:

- Flickering light, caused in the early stages of bulb failure
- Lights go out, caused when the ballast detects excessive, repetitive bulb re-strike
- Color change – The lamp may change to a dim pink glow.

Input power to the ballast must be terminated in order to reset the ballast's fault circuitry. In order to terminate the input power to the ballast, turn the lights off and back on again. Turning the lights off and back on again resets all of the fault circuitry within the ballast until the next occurrence of excessive, repetitive bulb re-strikes. When excessive, repetitive bulb re-strikes occur, replace the starter/arc tube assembly. The ballast will begin the start-up process when the starter/arc tube assembly is replaced. Repeatedly resetting the input power can overheat the internal components and cause permanent damage to the ballast. Allow a few minutes of cool-down time in between reset attempts.

Light Color

White light has a different color rating than regular headlamps. The range of white light that is acceptable is broad when compared to halogens. Therefore, some variation in headlight coloring between the right and left headlamp will be normal. One high intensity discharge (HID) at the end of the normal range may appear considerably different in color from one at the other end of the range. Difference in color is normal. Replace the arc tube only if the arc tube is determined to be at the bulb failure stage.

High Beam Headlamps (with and without T4F)

When the low beam headlamps are ON and the turn signal/multifunction switch is placed in the high beam position, ground is applied to the BCM through the high beam signal circuit. The BCM responds to the high beam request by applying ground to the high beam relay control circuit which energizes the high beam relay. With the high beam relay energized, the switch contacts close allowing battery voltage to flow through the 3 pin high beam fuse to the high beam control circuits illuminating the left and right high beam headlamps.

High Beam Headlamps (with Z75)

When the low beam headlamps are ON and the turn signal/multifunction switch is placed in the high beam position, ground is applied to the BCM through the high beam signal circuit. The BCM responds to the high beam request by applying ground to the high beam relay control circuit which energizes the high beam relay. With the high beam relay energized, the switch contacts close allowing battery voltage to flow through the 3 pin high beam fuse to the high beam control circuits. The high beam control circuits are connected to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly. The multifunction LED control modules respond the to the B+ input from the high beam relay by illuminating the left and right high beam LED headlamps.

Automatic High Beam Assist (AHBA)

The automatic high beam assist (AHBA) system operates the high beam headlamps ON and OFF automatically when the system is activated and certain conditions are met. The AHBA system consists of a front camera module that detects light and is able to identify approaching vehicles on an even, straight road at a distance of greater than 0.4 km (0.25 mi). The front camera module analyzes light color, intensity, and movement. The AHBA system will turn OFF the high beam headlamps when approaching vehicle headlamps or preceding vehicle taillights are detected by the front camera module. AHBA can be deactivated when the headlamp dimmer switch is moved from the neutral position to the high beam or flash to pass positions. AHBA can be reactivated by operating the high beam select switch from the neutral position to the high beam position twice within 2 seconds.

AHBA System Activation

- Vehicle ON
- Headlamp switch placed in the AUTO position
- Headlamp dimmer switch must be in the neutral position
- Outside lighting conditions must be dark
- Vehicle speed greater than 25 mph (40 km/h)

AHBA System Operation

The following are conditions that the AHBA system will turn the high beam headlamps off during operation:

- The system detects approaching traffic headlamps
- The system detects preceding traffic tail lamps
- Ambient light level too high due to towns or twilight situations
- The vehicle’s speed drops below 13 mph (22 km/h)
- Delay

Note: AHBA may not operate properly if any of the following conditions exist:

- Approaching and preceding vehicles lamps are undetectable due to dirt, snow, road spray, smoke, fog, or any other airborne conditions.

- The front camera module is covered with ice, dirt, snow, haze, or is obstructed.
- The vehicle is being driven on winding or hilly road conditions which would make any on coming vehicle headlamps undetectable by the AHBA.

AHBA System Deactivation

- Manually operating the headlamp dimmer switch from neutral to high beam position
- AHBA is deactivated automatically when the front or rear fog lamps are turned ON

AHBA System Indicator

The status of the AHBA system is shown by a green indicator located on the instrument panel cluster. When AHBA is active, the indicator will be illuminated continuously. If the operator deactivates the AHBA system, the indicator will turn off.

Cornering Lamps (with Z75)

The cornering lamps are activated automatically at vehicle speeds below 25 MPH (40 km/h) when the turn signal/multifunction switch is placed in either the left or right turn positions and/or when the steering angle is changed from the straight-ahead position towards the side the vehicle is turning. When the body control module (BCM) detects that one of these operations has occurred, the BCM responds to the cornering lamp request by applying voltage to cornering lamp control circuit illuminating the appropriate cornering lamp in the area that the vehicle is turning. The cornering lamps are deactivated automatically when the turn signal/multifunction switch is placed in the neutral position and/or the steering angle has returned in the straight-ahead position. The cornering lamps will not operate at vehicle speeds above 25 MPH (40 km/h).

Daytime Running Lamps

The daytime running lamps will illuminate continuously when the following conditions are met:

- The ignition is in the RUN or CRANK position
- The shift lever is out of the PARK position for vehicles equipped with automatic transmissions or the parking brake is released for vehicles with manual transmissions
- The low and high beam headlamps are OFF

Daytime Running Lamps (without T4F)

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 V depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor signal circuit to determine if outside lighting conditions are correct for either daytime running lights or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM will command the low beam headlamps ON. Any function or condition that turns on the headlamps will cancel daytime running lamps operation.

Daytime Running Lamps (X88 with TB8 or T4F) or (Z88)

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 V depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor to determine if outside lighting conditions are correct for either daytime running lamps or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM applies B+ to both daytime running lamp control circuits to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly. The multifunction LED control modules respond the to the B+ input from the BCM by illuminating the left and right daytime running lamp LED’s. When the daytime running lamps are ON and a turn signal is activated, the lower portion of the daytime running lamp halo is used for the turn signal and color changes to amber. The remaining portion of the daytime running lamp halo turns OFF for as long as the respective turn signal is active. When the turn signal is turned OFF the full daytime running lamp halo illuminates at normal color. Any function or condition that turns on the low beam headlamps will cancel daytime running lamps operation.

Daytime Running Lamps (Z75)

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 V depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor to determine if outside lighting conditions are correct for either daytime running lamps or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM applies B+ to both daytime running lamp control circuits to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly and multifunction lamp assemblies – front fascias. The multifunction LED control modules respond the to the B+ input from the BCM by illuminating the left and right daytime running lamp LED’s located in each headlamp assembly as well as each multifunction lamp assembly located in the front fascia. Any function or condition that turns on the low beam headlamps will cancel daytime running lamps operation.

Flash to Pass

When the turn signal/multifunction switch is momentarily placed in the flash to pass position, ground is applied to the turn signal/multifunction switch. The turn signal/multifunction switch applies ground to the body control module (BCM) through the flash to pass switch signal circuit. The BCM responds to the flash to pass request by applying ground to the high beam relay control circuit. This energizes the high beam relay, closing the switch side contacts of the high beam relay, applying battery voltage to the 3 pin high beam fuse. Battery voltage is applied from the high beam fuse through the high beam control circuit to the high beam headlamp assemblies. This causes the high beam headlamps to illuminate at full brightness momentarily.

Hazard Lamps

The hazard flashers may be activated in any power mode. The hazard switch signal circuit is momentarily grounded when the hazard switch is pressed. The body control module (BCM) responds to the hazard switch signal input by supplying battery voltage to all four turn signal lamps in an ON and OFF duty cycle. When the hazard switch is activated, the BCM sends a serial data message to the instrument panel cluster requesting both turn signal indicators to be cycled ON and OFF.

The instrument panel dimmer switch controls the brightness of the interior backlighting components. When the instrument panel dimmer switch is placed in a desired brightness position, the body control module (BCM) receives a signal from the instrument panel dimmer switch and responds by applying a pulse width modulated voltage to the hazard switch light emitting diode (LED) backlighting control circuit illuminating the LED to the desired level of brightness.

Park, Tail, and License Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, and license lamps control circuits illuminating the park, tail, and license lamps.

Stop Lamps

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM will apply battery voltage to the left and right stop lamp control circuits as well as the center high mounted stop lamp control circuit illuminating the left and right stop lamps and the center high mounted stop lamp.

Turn Signal Lamps

Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the front and rear turn signal lamps through there respective control circuits. When a turn signal request is received by the BCM, a serial data message is sent to the instrument cluster requesting the respective turn signal indicator be pulsed ON and OFF.

Backup Lamps

With the engine ON and the transmission in the REVERSE position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the REVERSE position. The BCM applies battery voltage to the backup lamps control circuit illuminating the backup lamps. Once the driver moves the gear selector out of the REVERSE position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamps control circuit. The engine must be ON for the backup lamps to operate.

Trailer Lamps

Backup Lamps

For backup lamp operation, the backup lamp relay is supplied with battery voltage at all times. With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit.

Park Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, license lamps, and trailer park lamps control circuits illuminating the park, tail, license, and trailer park lamps.

Stop Lamps

For stop lamp operation, the left and right trailer stop/turn signal lamp relay’s are supplied with battery voltage at all times. The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the left and right trailer stop/turn signal lamp relay’s by applying voltage to the left and right stop lamp relay control circuits. With the left and right trailer stop/turn signal lamp relay’s energized, the relay switch contacts close and battery voltage is applied through the left and right trailer stop/turn signal fuse’s to the trailer stop lamp control circuits which illuminates the trailer stop lamps.

Turn Signal Lamps

For turn signal lamp operation, the left and right trailer stop/turn signal lamp relay’s are supplied with battery voltage at all times. Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the left and right trailer stop/turn signal lamp relay control circuits energizing the relay’s in an ON and OFF cycle. With the left and right trailer stop/turn signal lamp relay’s energized, the relay switch contacts cycle ON and OFF applying battery voltage through the left and right trailer stop/turn signal fuse’s to the trailer turn signal lamp control circuits which illuminates the trailer turn signal lamps in an ON and OFF cycle.

Trailer Lamps (Export VQ9)

The trailer interface control module is supplied with battery voltage as well as ignition voltage from the rear body fuse block and is permanently grounded. For lighting operation, the trailer interface control module receives serial data messages from the body control module (BCM) indicating what lamps have been activated on the vehicle. The trailer interface control module responds by applying voltage to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer.

For stop lamp operation, the trailer interface control module receives an input from the center high mount stop lamp control circuit. When the brakes are applied on the vehicle, the trailer interface control module receives the brake applied input from the center high mount stop lamp control circuit. The trailer interface control module responds by applying voltage to the trailer stop lamp control circuit illuminating the trailer stop lamps. The trailer interface control module also receives a serial data message from the BCM indicating that the vehicle brakes have been applied.

Battery Run Down Protection/Inadvertent Power

To provide battery run down protection, the exterior lamps will be deactivated automatically under certain conditions. The BCM monitors the state of the headlamp switch. If the park or headlamp switch is ON when the ignition switch is placed in either the CRANK or RUN position and then placed in the OFF position, the BCM initiates a 10 minute timer. At the end of the 10 minutes, the BCM will turn off the control power output to the park lamp controls as well as the headlamp relay coils, deactivating the exterior lamps. This feature will be cancelled if any power mode other than OFF becomes active. The BCM will disable battery run down protection if any of the following conditions exist. The park or headlamp switch is placed in the ON to OFF position, and back to the ON position during battery run down protection. The BCM determined that the park or headlamp switch was not active when the ignition was turned OFF.

Interior Lighting Systems Description and Operation

Interior Lamps

The interior lighting system consist of two groups. This first group includes lamps that may not be dimmed.

- Dome lamps
- Instrument panel compartment lamps
- Reading lamps
- Rear compartment courtesy lamp
- Sunshade mirror lamps

Dome Lamps

The dome lamp switch has 3 positions: DOOR, OFF, and ON. The ON position provides a ground for continuous operation and the dome lamp will remain illuminated until the switch is placed in either the DOOR or OFF position. When in the DOOR position, the dome lamp operation is controlled by the body control module (BCM). When any door is opened, the door ajar switch contacts close and the BCM receives a door-open input. The BCM illuminates the dome lamp when any door is opened or a door lock/unlock request is activated with the key fob. After all doors have been closed, the dome lamp will remain illuminated approximately 3 seconds after the last door closes. When the driver places the dome lamp switch in the OFF position, the dome lamp will be disabled. In the event that the dome lamp were to remain illuminated for more than 10 minutes with the ignition switch in the OFF position, the BCM will deactivate the dome lamp control circuit to prevent total battery discharge. The dome lamps will turn OFF using the theater dimming feature when controlled by the BCM.

Center Console Compartment Lamp

The inadvertent power supply voltage circuit from the BCM provides battery voltage to the center console compartment lamp. When the center console is opened, the center console compartment lamp switch contacts close providing a path to ground and the center console compartment lamp illuminates. If the operator inadvertently leaves the center console compartment door open with the center console compartment lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Instrument Panel Compartment Lamp

The inadvertent power supply voltage circuit from the BCM provides battery voltage to the instrument panel compartment (glove box) lamp. When the instrument panel compartment is opened, the instrument panel compartment lamp switch contacts close providing a path to ground and the instrument panel compartment lamp illuminates. If the operator inadvertently leaves the instrument panel compartment door open with the instrument panel compartment lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Reading Lamps

The inadvertent power supply voltage circuit from the BCM provides battery positive voltage to each reading lamp. When a reading lamp switch is activated, the switch contacts close providing a path to ground and the reading lamp illuminates. If the operator inadvertently leaves a reading lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Rear Compartment Courtesy Lamp

When the rear compartment is opened, the rear compartment lid latch opens providing a rear compartment open input signal to the BCM. The BCM responds by applying battery voltage to the rear compartment courtesy lamp control circuit illuminating the rear compartment courtesy lamp.

Sunshade Mirror Lamps

The inadvertent power supply voltage circuit from the BCM provides battery voltage to each set of sunshade mirror lamps. When the sunshade mirror cover is opened, a switch closes providing ground and the sunshade lamps illuminate. If the operator inadvertently leaves a sunshade mirror cover open with the lamps ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Keyless Entry Interior Illumination

When the operator uses the keyless entry transmitter in order to unlock the doors, the BCM receives a door-unlock signal. The BCM must receive inputs from various systems that indicate that the ignition switch is OFF, the courtesy lamp switch is OFF, and all doors are closed before the BCM will activate the interior lamps. After all doors have been closed, the courtesy lamps will turn OFF immediately if the ignition switch is turned to the ON position, the door locks are LOCKED, or approximately 20 seconds after the last door closes. The BCM will turn off the courtesy lamps through the theater dimming feature. The BCM keeps the courtesy lamps on for 40 seconds after an alarm event is completed.

Interior Lamps Dimming

The second group includes lamps which may be dimmed. This group may use a combination of light emitting diodes (LED), incandescent lamps, and pulse width modulation illumination.

- Dome/reading lamps – front
- Dome/reading lamps – rear
- Door lock switch – driver
- Door lock switch – passenger
- Headlamp switch
- Hazard switch
- HVAC control head assembly
- Ignition mode switch
- Multifunction switch – instrument panel
- Outside rearview mirror switch
- Park brake switch

- Radio
- Rear compartment lid unlatch switch
- Steering wheel control switch – left
- Steering wheel control switch – right
- Sun roof switch
- Sun roof tilt switch
- Window switch – passenger

With the headlamp switch in the PARK or HEAD position, the park lamp switch signal circuit provides an input to the body control module (BCM). The BCM responds by applying voltage to the park lamps as well as the backlight dimming control circuits illuminating all components with interior backlighting. All interior backlighting turns ON at the dimming level indicated by the instrument panel dimmer switch. The instrument panel instrument panel dimmer switch is a momentary type switch and utilizes a resistor ladder to increase and decrease the brightness of the interior backlighting components. The instrument panel dimmer switch provides a voltage signal to the BCM that will increase as the brightness of the lights are increased and decrease as the brightness of the lights are decreased. The BCM provides a low reference signal and a B+ circuit to the instrument panel dimmer switch. When the instrument panel dimmer switch is held in the desired position, the dimmed voltage setting is applied from the instrument panel dimmer switch through the instrument panel dimmer switch signal circuit to the BCM. The BCM interprets the signal and applies a pulse width modulated voltage through the backlighting control circuits illuminating the interior backlighting to the requested level of brightness.

Battery Rundown Protection/Inadvertent Power

The BCM inadvertent power supply voltage circuit provides battery voltage to all of the interior courtesy lamps. In the event that any of these lamps were to remain illuminated for a period of more than 10 minutes with the ignition switch in the OFF position, the BCM will deactivate the inadvertent power supply voltage circuit to prevent total battery discharge. If the ignition switch is turned to any position other than OFF, or if a lamp switch is activated during this 10 minute period, the timer resets for another 10 minutes.

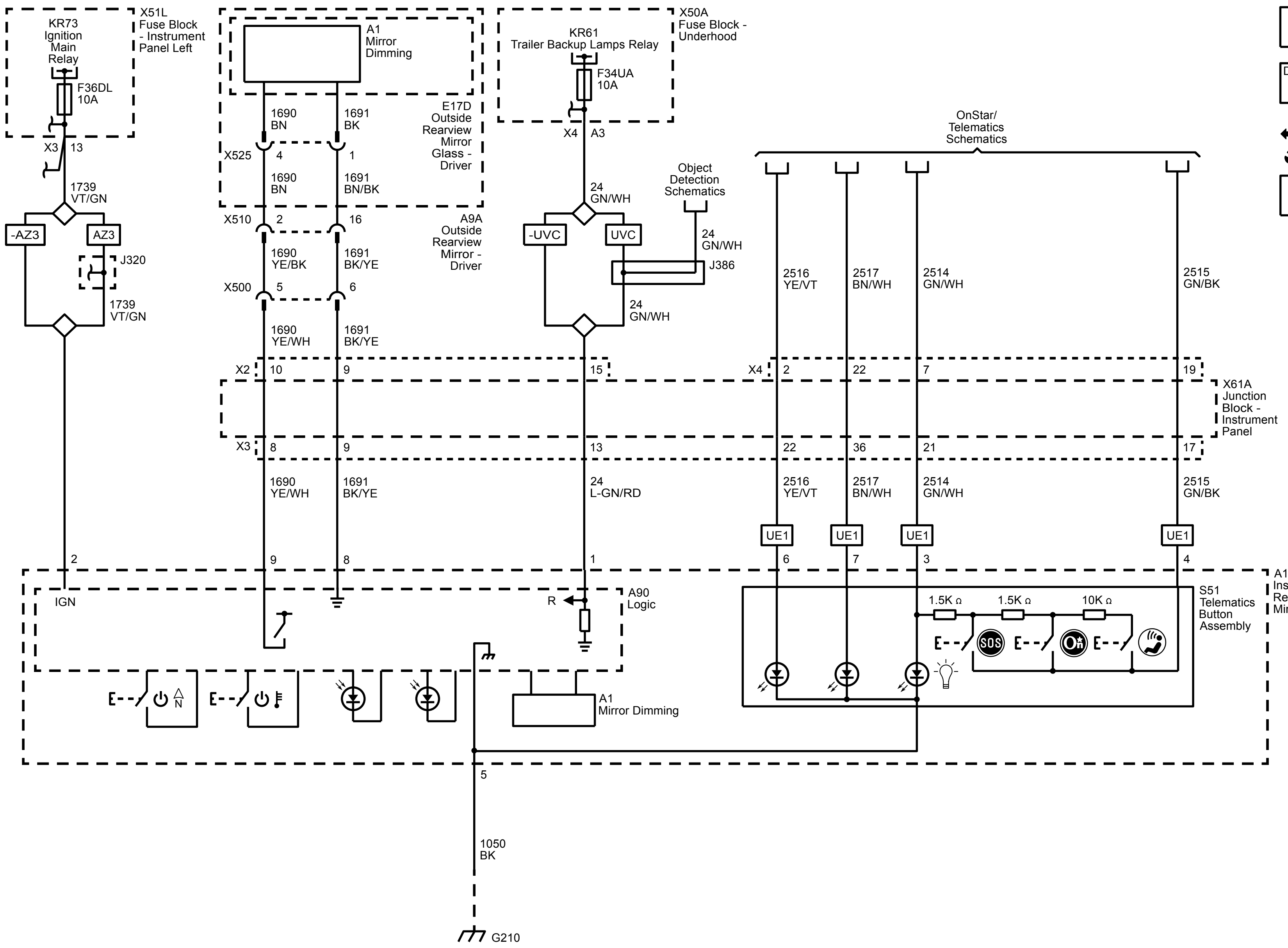
Body Systems

Mirrors

Schematic and Routing Diagrams

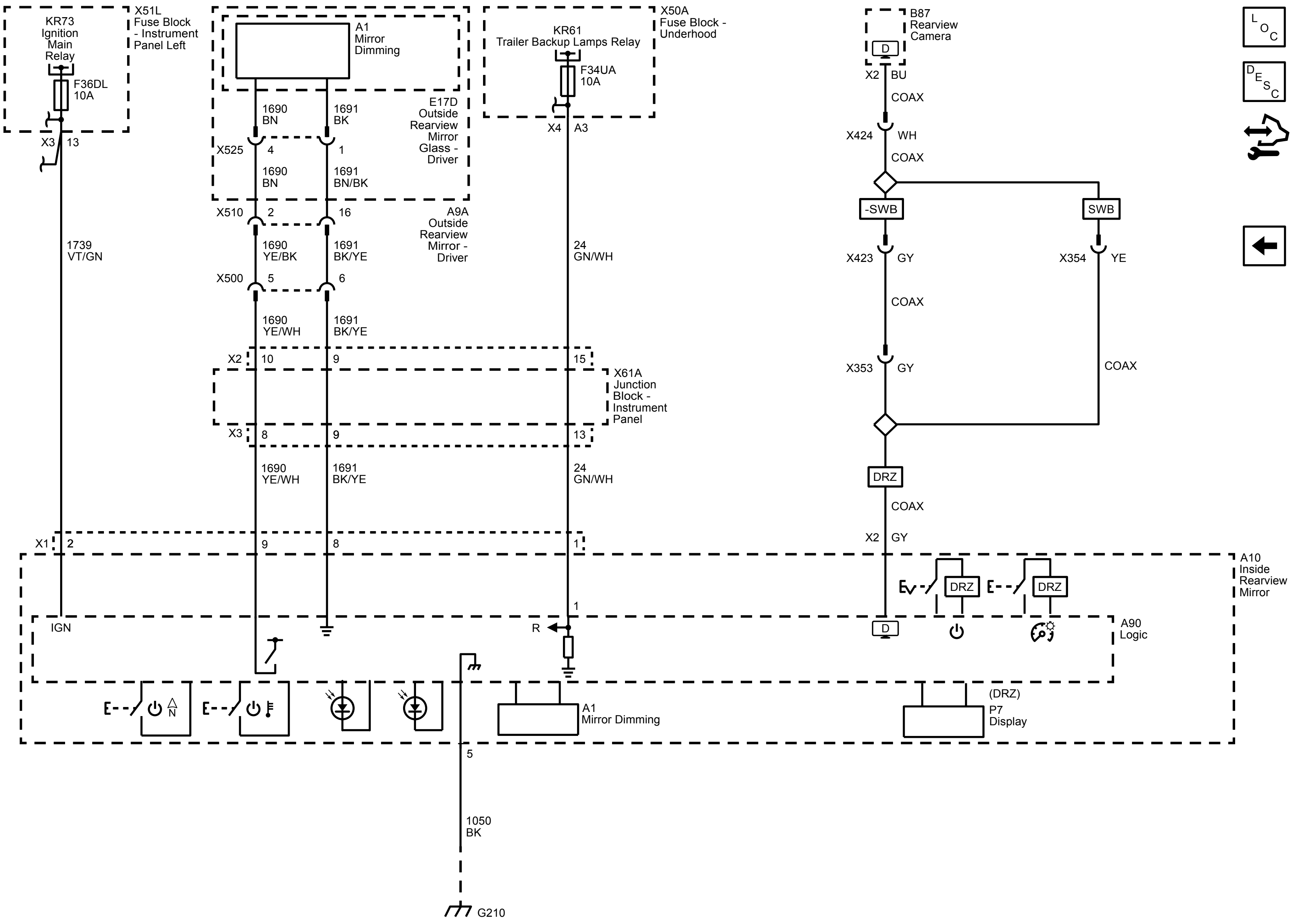
Inside Rearview Mirror Schematics

DD8 (Without DRZ)



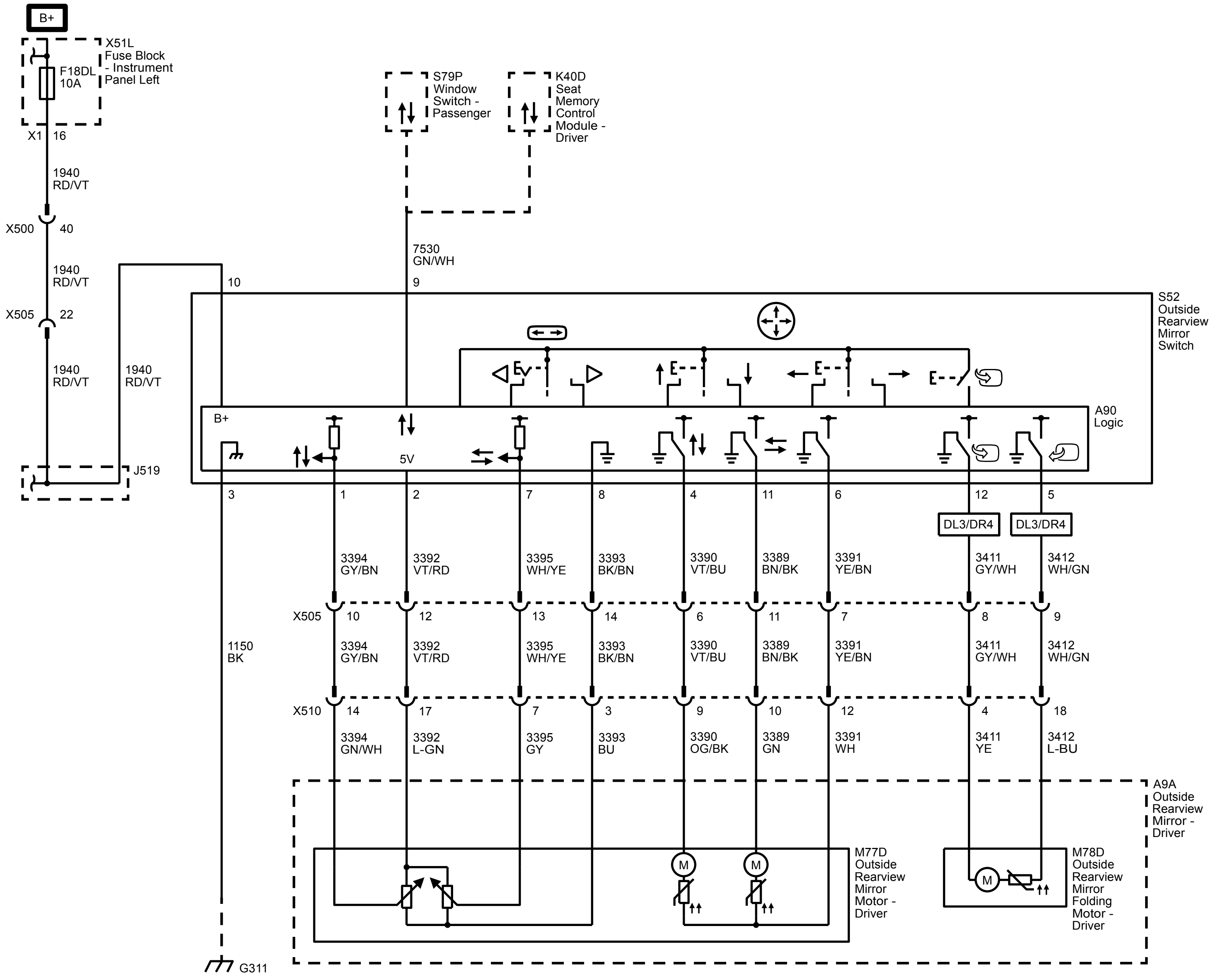
KR73 Ignition Main Relay
X51L Fuse Block - Instrument Panel Left
F36DL 10A
X3 13
1739 VT/GN
-AZ3
AZ3
J320
1739 VT/GN
A1 Mirror Dimming
E17D Outside Rearview Mirror Glass - Driver
1690 BN
1691 BK
X525 4
1
1690 BN
1691 BN/BK
X510 2
16
A9A Outside Rearview Mirror - Driver
1690 YE/BK
1691 BK/YE
X500 5
6
1690 YE/WH
1691 BK/YE
X50A Fuse Block - Underhood
KR61 Trailer Backup Lamps Relay
F34UA 10A
X4 A3
24 GN/WH
-UVC
UVC
Object Detection Schematics
24 GN/WH
J386
24 GN/WH
OnStar/ Telematics Schematics
2516 YE/VT
2517 BN/WH
2514 GN/WH
2515 GN/BK
X2 10
9
15
X4 2
22
7
19
X61A Junction Block - Instrument Panel
X3 8
9
13
22
36
21
17
1690 YE/WH
1691 BK/YE
24 L-GN/RD
2516 YE/VT
2517 BN/WH
2514 GN/WH
2515 GN/BK
UE1
UE1
UE1
UE1
2
9
8
1
6
7
3
4
A10 Inside Rearview Mirror
IGN
R
A90 Logic
A1 Mirror Dimming
S51 Telematics Button Assembly
1.5K Ω
1.5K Ω
10K Ω
SOS
N
5
1050 BK
G210

DD8 with DRZ

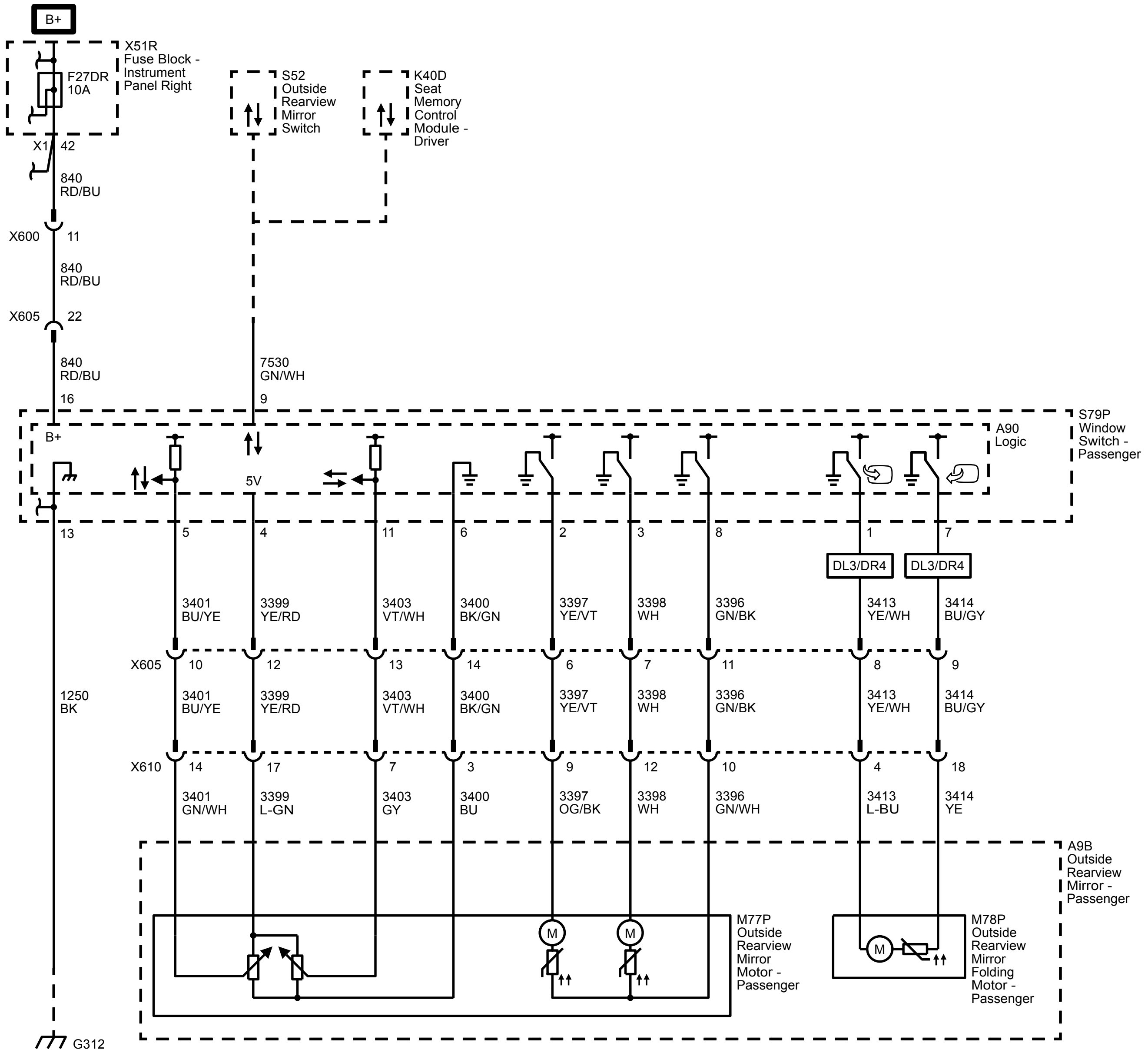

KR73
Ignition
Main
Relay
X51L
Fuse Block
- Instrument
Panel Left
F36DL
10A
X3
13
1739
VT/GN
A1
Mirror
Dimming
1690
BN
1691
BK
E17D
Outside
Rearview
Mirror
Glass -
Driver
X525
4
1
1690
BN
1691
BN/BK
X510
2
16
A9A
Outside
Rearview
Mirror -
Driver
1690
YE/BK
1691
BK/YE
X500
5
6
1690
YE/WH
1691
BK/YE
KR61
Trailer Backup Lamps Relay
X50A
Fuse Block -
Underhood
F34UA
10A
X4
A3
24
GN/WH
X2
10
9
15
X61A
Junction
Block -
Instrument
Panel
X3
8
9
13
1690
YE/WH
1691
BK/YE
24
GN/WH
B87
Rearview
Camera
D
X2
BU
COAX
X424
WH
COAX
-SWB
SWB
X423
GY
X354
YE
COAX
X353
GY
COAX
DRZ
COAX
X2
GY
X1
2
9
8
1
A10
Inside
Rearview
Mirror
DRZ
DRZ
1
IGN
R
D
A90
Logic
N
A1
Mirror Dimming
(DRZ)
P7
Display
5
1050
BK
G210
L O C
D E S C

Outside Rearview Mirror Schematics

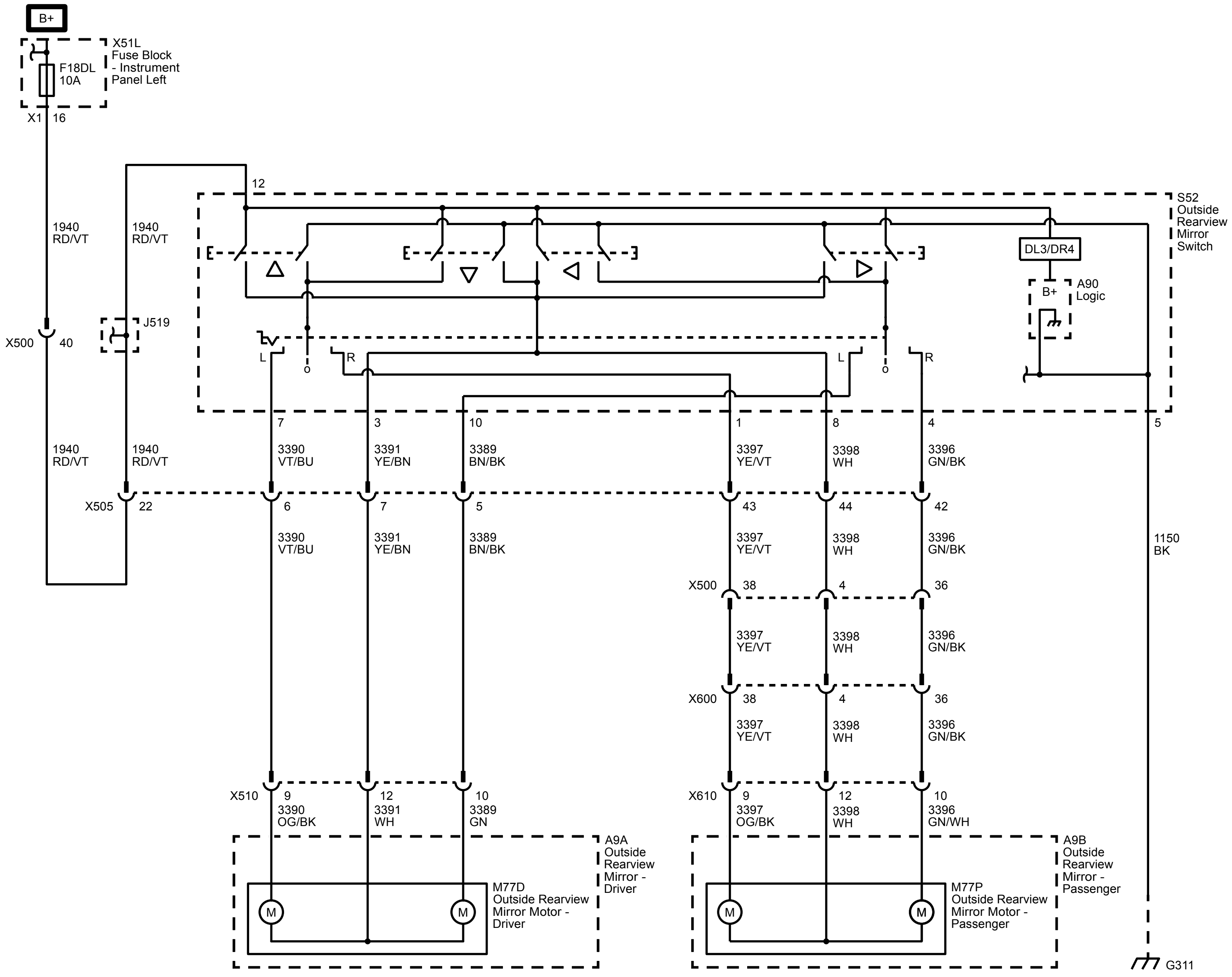
Controls, Driver Position and Folding (A45)


B+
X51L
Fuse Block
- Instrument
Panel Left
F18DL
10A
X1
16
1940
RD/VT
X500
40
1940
RD/VT
X505
22
1940
RD/VT
1940
RD/VT
J519
S79P
Window
Switch -
Passenger
K40D
Seat
Memory
Control
Module -
Driver
7530
GN/WH
10
9
S52
Outside
Rearview
Mirror
Switch
A90
Logic
B+
5V
3
1
2
7
8
4
11
6
12
5
DL3/DR4
DL3/DR4
3394
GY/BN
3392
VT/RD
3395
WH/YE
3393
BK/BN
3390
VT/BU
3389
BN/BK
3391
YE/BN
3411
GY/WH
3412
WH/GN
X505
10
12
13
14
6
11
7
8
9
1150
BK
3394
GY/BN
3392
VT/RD
3395
WH/YE
3393
BK/BN
3390
VT/BU
3389
BN/BK
3391
YE/BN
3411
GY/WH
3412
WH/GN
X510
14
17
7
3
9
10
12
4
18
3394
GN/WH
3392
L-GN
3395
GY
3393
BU
3390
OG/BK
3389
GN
3391
WH
3411
YE
3412
L-BU
A9A
Outside
Rearview
Mirror -
Driver
M
M
M77D
Outside
Rearview
Mirror
Motor -
Driver
M
M78D
Outside
Rearview
Mirror
Folding
Motor -
Driver
G311

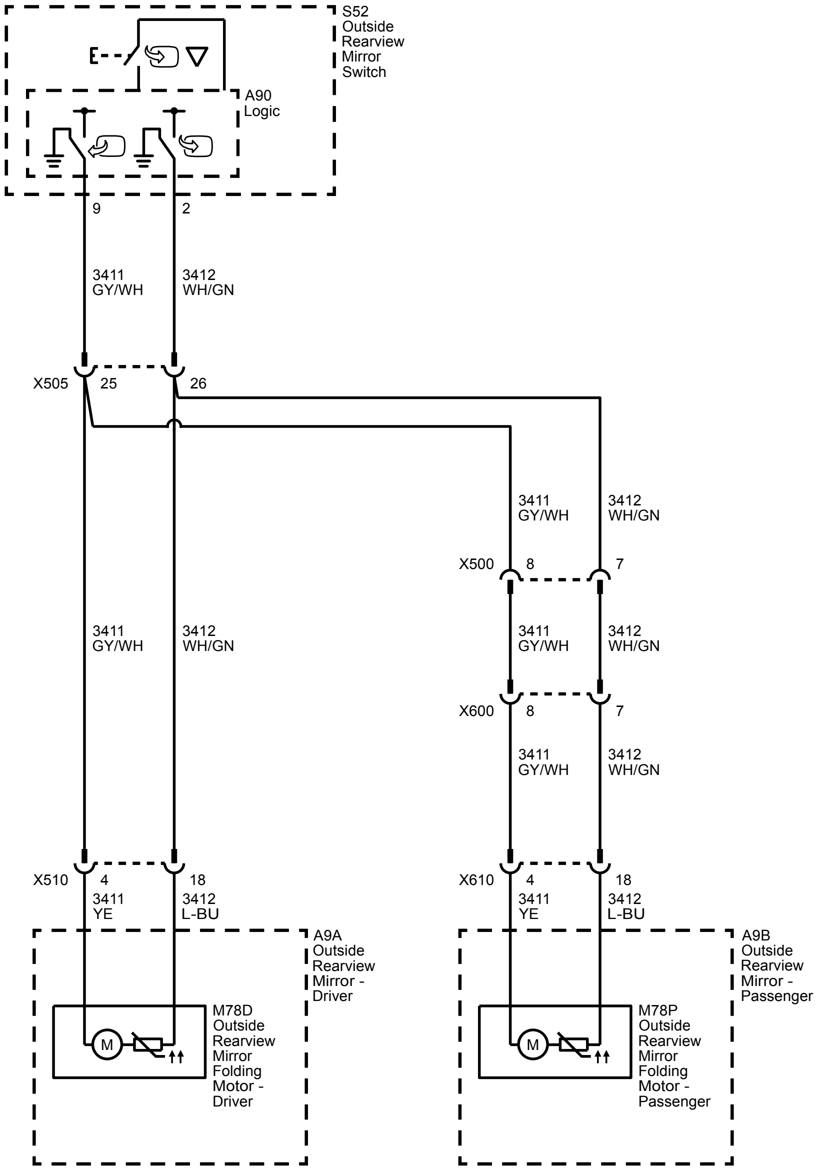
Passenger Position and Folding (A45)


B+
X51R
Fuse Block - Instrument Panel Right
F27DR
10A
X1
42
840
RD/BU
X600
11
840
RD/BU
X605
22
840
RD/BU
16
S52
Outside Rearview Mirror Switch
K40D
Seat Memory Control Module - Driver
7530
GN/WH
9
B+
5V
A90
Logic
S79P
Window Switch - Passenger
13
5
4
11
6
2
3
8
1
7
DL3/DR4
DL3/DR4
3401
BU/YE
3399
YE/RD
3403
VT/WH
3400
BK/GN
3397
YE/VT
3398
WH
3396
GN/BK
3413
YE/WH
3414
BU/GY
X605
10
12
13
14
6
7
11
8
9
1250
BK
3401
BU/YE
3399
YE/RD
3403
VT/WH
3400
BK/GN
3397
YE/VT
3398
WH
3396
GN/BK
3413
YE/WH
3414
BU/GY
X610
14
17
7
3
9
12
10
4
18
3401
GN/WH
3399
L-GN
3403
GY
3400
BU
3397
OG/BK
3398
WH
3396
GN/WH
3413
L-BU
3414
YE
A9B
Outside Rearview Mirror - Passenger
M
M
M77P
Outside Rearview Mirror Motor - Passenger
M
M78P
Outside Rearview Mirror Folding Motor - Passenger
G312

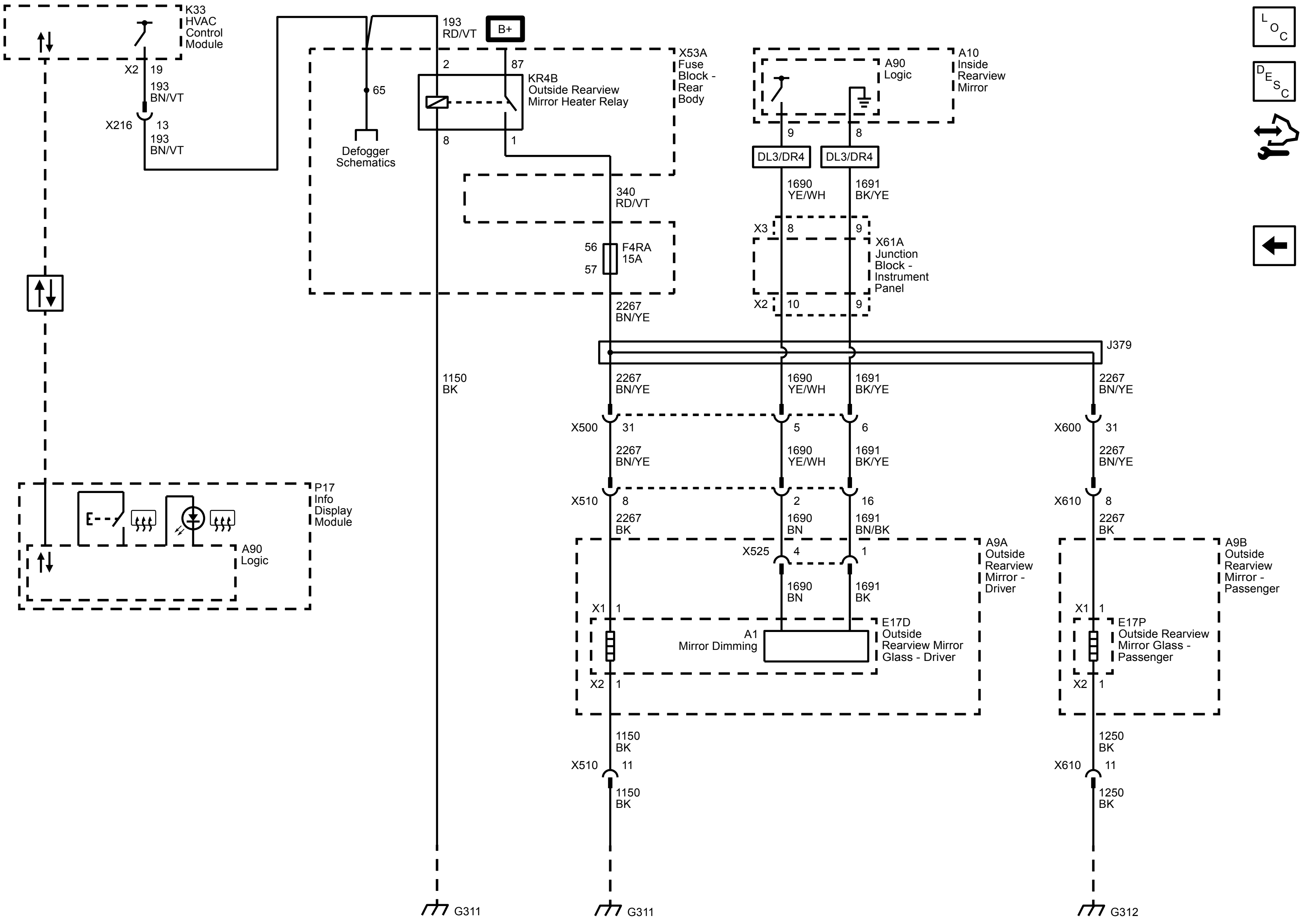
Position (without A45)


B+
X51L
Fuse Block
- Instrument
Panel Left
F18DL
10A
X1
16
12
1940
RD/VT
1940
RD/VT
S52
Outside
Rearview
Mirror
Switch
DL3/DR4
B+
A90
Logic
X500
40
J519
L
o
R
L
o
R
7
3
10
1
8
4
5
1940
RD/VT
1940
RD/VT
3390
VT/BU
3391
YE/BN
3389
BN/BK
3397
YE/VT
3398
WH
3396
GN/BK
X505
22
6
7
5
43
44
42
3390
VT/BU
3391
YE/BN
3389
BN/BK
3397
YE/VT
3398
WH
3396
GN/BK
1150
BK
X500
38
4
36
3397
YE/VT
3398
WH
3396
GN/BK
X600
38
4
36
3397
YE/VT
3398
WH
3396
GN/BK
X510
9
12
10
3390
OG/BK
3391
WH
3389
GN
X610
9
12
10
3397
OG/BK
3398
WH
3396
GN/WH
A9A
Outside
Rearview
Mirror -
Driver
M77D
Outside Rearview
Mirror Motor -
Driver
M
M
A9B
Outside
Rearview
Mirror -
Passenger
M77P
Outside Rearview
Mirror Motor -
Passenger
M
M
G311

Folding (DL3 or DR4 without A45)

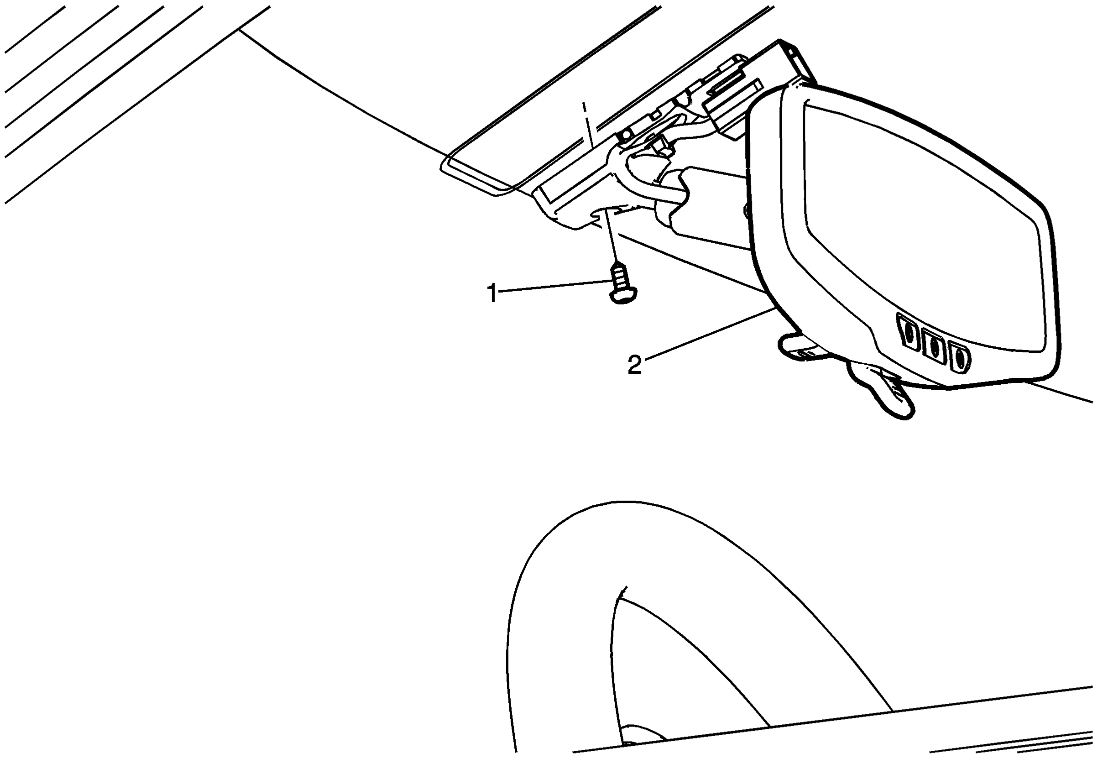

S52
Outside
Rearview
Mirror
Switch
A90
Logic
9
2
3411
GY/WH
3412
WH/GN
X505
25
26
3411
GY/WH
3412
WH/GN
X500
8
7
3411
GY/WH
3412
WH/GN
3411
GY/WH
3412
WH/GN
X600
8
7
3411
GY/WH
3412
WH/GN
X510
4
18
3411
YE
3412
L-BU
X610
4
18
3411
YE
3412
L-BU
A9A
Outside
Rearview
Mirror -
Driver
A9B
Outside
Rearview
Mirror -
Passenger
M
M78D
Outside
Rearview
Mirror
Folding
Motor -
Driver
M
M78P
Outside
Rearview
Mirror
Folding
Motor -
Passenger

Dimming (DL3 or DR4) and Heating


K33 HVAC Control Module
X2 19
193 BN/VT
X216 13
193 BN/VT
193 RD/VT
B+
65
Defogger Schematics
X53A Fuse Block - Rear Body
2
87
KR4B Outside Rearview Mirror Heater Relay
8
1
340 RD/VT
56
57
F4RA 15A
2267 BN/YE
1150 BK
A10 Inside Rearview Mirror
A90 Logic
9
8
DL3/DR4
DL3/DR4
1690 YE/WH
1691 BK/YE
X3 8 9
X61A Junction Block - Instrument Panel
X2 10 9
J379
2267 BN/YE
1690 YE/WH
1691 BK/YE
2267 BN/YE
X500 31
5
6
X600 31
2267 BN/YE
1690 YE/WH
1691 BK/YE
2267 BN/YE
X510 8
2
16
X610 8
2267 BK
1690 BN
1691 BN/BK
2267 BK
X525 4
1
1690 BN
1691 BK
A9A Outside Rearview Mirror - Driver
A9B Outside Rearview Mirror - Passenger
X1 1
A1 Mirror Dimming
E17D Outside Rearview Mirror Glass - Driver
X1 1
E17P Outside Rearview Mirror Glass - Passenger
X2 1
X2 1
1150 BK
1250 BK
X510 11
X610 11
1150 BK
1250 BK
P17 Info Display Module
A90 Logic
G311
G311
G312

Repair Instructions

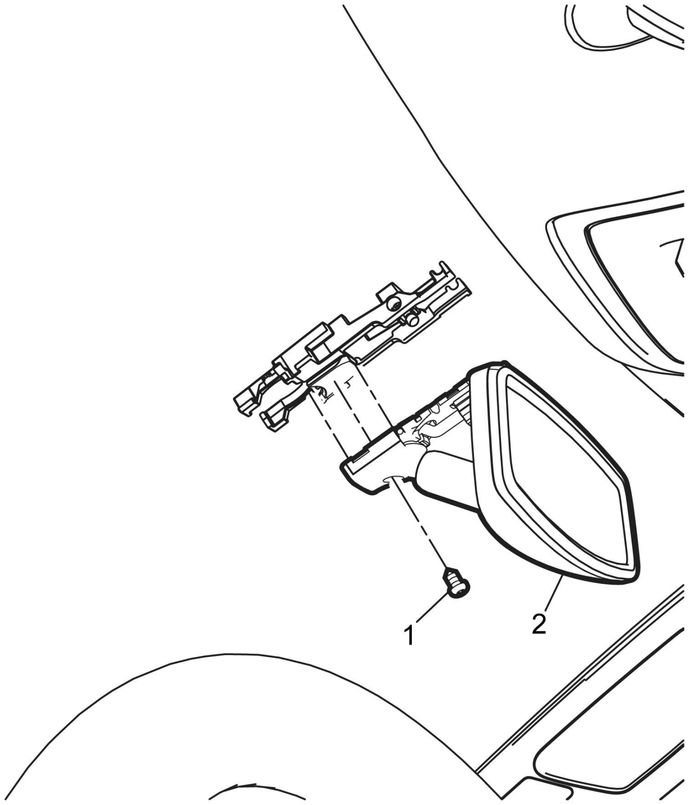
Inside Rearview Mirror Replacement (With UE1)



Inside Rearview Mirror Replacement (With UE1)

Callout	Component Name
Preliminary Procedure Remove the windshield multifunction sensor mount bracket cover. Refer to CELL Link Error - Link target cell (cell ID 221811) is invalid for this publication..	
1	Inside Rearview Mirror Screw **Caution:** Refer to CELL Link Error - Link target cell (cell ID 178169) is invalid for this publication.. **Procedure** 1. Disconnect electrical connector. 2. Adjust the mirror to the full upward position. 3. Loosen the set screw located at the base of the mirror. **Tighten:** 1.8 Y (16 lb in)
2	Inside Rearview Mirror **Procedure** 1. Slide the mirror upward off of the rearview mirror button. 2. Refer to CELL Link Error - Link target cell (cell ID 72864) is invalid for this publication. for programming and setup information, if required.

Inside Rearview Mirror Replacement (Without UE1)



Inside Rearview Mirror Replacement (Without UE1)

Callout	Component Name
1	Inside Rearview Mirror Screw **Caution:** Refer to CELL Link Error - Link target cell (cell ID 178169) is invalid for this publication.. **Procedures** **1.** Remove the windshield multifunction sensor mount bracket cover. Refer to CELL Link Error - Link target cell (cell ID 221811) is invalid for this publication.. **2.** Disconnect the electrical connector. **3.** Adjust the mirror to the full upward position. **4.** Loosen the set screw located at the base of the mirror. **Tighten:** 1.8 Y (16 lb in)
2	Inside Rearview Mirror **Procedure** Slide the mirror upward off of the rearview mirror button.

Description and Operation

Automatic Day-Night Mirror Description and Operation

Inside Rearview Mirror with the Automatic Day-Night Feature System Operation

The inside rearview mirror uses 2 photocell sensors. One sensor is the headlight sensor, located on the face side of the mirror. The headlight sensor is used to determine light conditions present at the mirror face. The other sensor is the ambient light sensor, located on the rear of the mirror or windshield side. The ambient light sensor is used to determine the exterior light conditions. With a low exterior light condition detected, and a high light condition from behind the car, at the headlight sensor, the inside rearview mirror will automatically darken the face of the mirror.

In the daytime, the mirror is in a normal state because of the high exterior light condition that is indicated by the ambient light sensor. With the gear selector lever in the REVERSE position and the engine running, backup lamp supply voltage is supplied as an input to the inside rearview mirror. The mirror monitors this input to disable the automatic day-night feature. This allows the driver to see objects in the mirror clearly when backing up, even during the night.

Driver Outside Rearview Mirror with Automatic Day-Night System Operation (If Equipped)

The automatic day-night feature of the driver outside rearview mirror is controlled by the inside rearview mirror. The inside rearview mirror supplies control and low reference to the driver outside rearview mirror. At night, with the automatic day-night feature enabled, the driver outside rearview mirror will automatically darken with the inside rearview mirror to reduce glare from headlamps behind the vehicle.

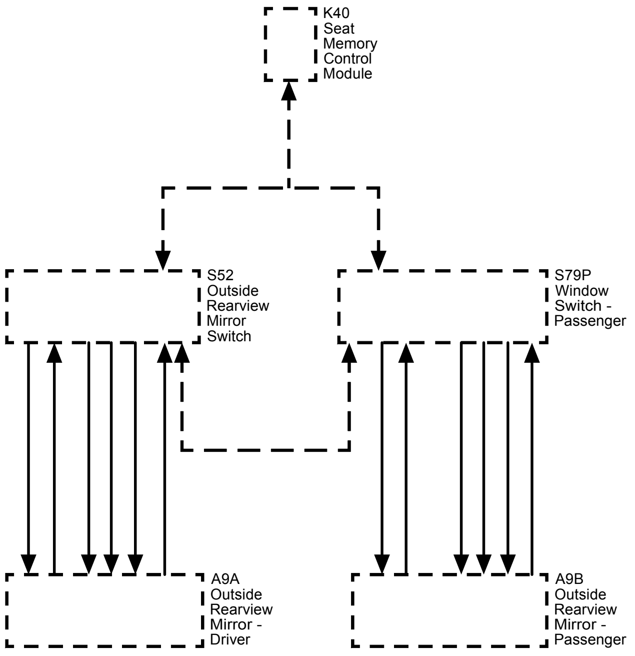
Outside Mirror Description and Operation (With A45)

Power Mirror System Components

The power mirror system consists of the following components:

- Memory Seat Control Module
- Outside Rearview Mirror Switch
- Passenger Window Switch
- Driver Outside Rearview Mirror
- Passenger Outside Rearview Mirror

Power Mirrors with A45 Block Diagram


K40 Seat Memory Control Module
S52 Outside Rearview Mirror Switch
S79P Window Switch - Passenger
A9A Outside Rearview Mirror - Driver
A9B Outside Rearview Mirror - Passenger

Power Mirror System Controls

The outside mirror switch and passenger window switch are on a serial data circuit with the memory seat control module as the master. The mirror select and directional control switches are inputs to the memory seat module through the serial data circuit. When the memory seat module receives switch inputs from the outside mirror switch, mirror output commands are sent to the appropriate switch through the serial data circuit. The outside mirror switch and passenger window switch control the left and right outside rear view mirrors through bi-directional motor control circuits. The motor control circuits are floating while in an inactive state and the switches will apply power and ground to the control circuits as necessary to move the mirror in the commanded direction.

Mirror position is determined by both horizontal and vertical position sensors in each of the power mirrors. The outside mirror switch and passenger window switch supply a 5 V reference, low reference, and horizontal and vertical position signal circuits to these sensors. The signal circuits are referenced from 5 V by the switches and the signal circuit voltage levels represent the mirror positions. The mirror positions are sent to the memory seat module through the serial data circuit where they are stored for memory mirror operation. When the memory seat module receives a memory recall command, the memory seat module will send the go to position commands to the outside mirror switch and passenger window switch. The switches will then drive the appropriate mirror motors to the commanded position sensor settings.

Heated Mirrors

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned on battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

Outside Mirror Description and Operation (Without A45)

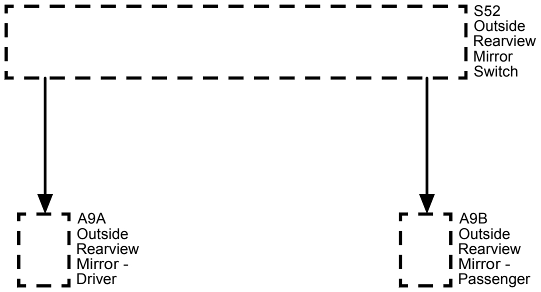
Power Mirror System Components

The power mirror system consists of the following components:

- Mirror direction switch — Controls the left, right, up and down movements of the mirrors
- Mirror select switch — Allows the operator to select the mirror to be moved
- Left outside mirror — Contains both the horizontal and vertical mirror motors
- Right outside mirror — Contains both the horizontal and vertical mirror motors

Each of the outside power mirrors contains 2 motors. The up-down motor operates the vertical directions and the left-right motor operates the horizontal directions. Each of the power mirror motors are internally circuit breaker protected.

Power Mirrors Without A45 Block Diagram



Power Mirror System Controls

The outside mirror switch incorporates a mirror select switch and a 4 position mirror direction switch.

The mirror select switch allows the driver to select the mirror to be moved by turning the switch to L position enabling the left outside mirror or turning the switch to R position enabling the right outside mirror.

The mirror direction switch is a 4 position switch that allows the operator to move the selected mirror up, down, left or right.

Power Mirror System Operation

The outside mirror switch receives power through the battery positive voltage circuit from the underhood fuse block. The outside mirror switch also receives a constant ground.

The 4 positions of the direction switch have multiple switch contacts. When not in use, the directional contacts are isolated from any circuit. Each of the contacts are connected to opposing sides of the appropriate mirror motors through the selector switch. The selector switch interrupts or completes these circuits depending on the position of the selector switch, L or R.

If the mirror select switch is placed in the L position and the up switch is pressed, battery voltage will be supplied to the driver outside mirror vertical motor through the driver mirror motor up control circuit and return to the mirror switch through the driver mirror motor left/down control circuit, then to ground and the mirror will move up. If the down switch is pressed, the driver mirror motor left/down control circuit supplies battery voltage and the driver mirror motor up control circuit completes the path to the mirror switch, then to ground and the mirror will move down.

The remainder of the mirror functions operate in the same manner as described above. Placing the mirror control switch in opposing positions, left/right or up/down, will reverse the voltage polarity to the mirror motor, utilizing the same circuits and the mirror will move accordingly.

Heated Mirrors

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned ON, battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

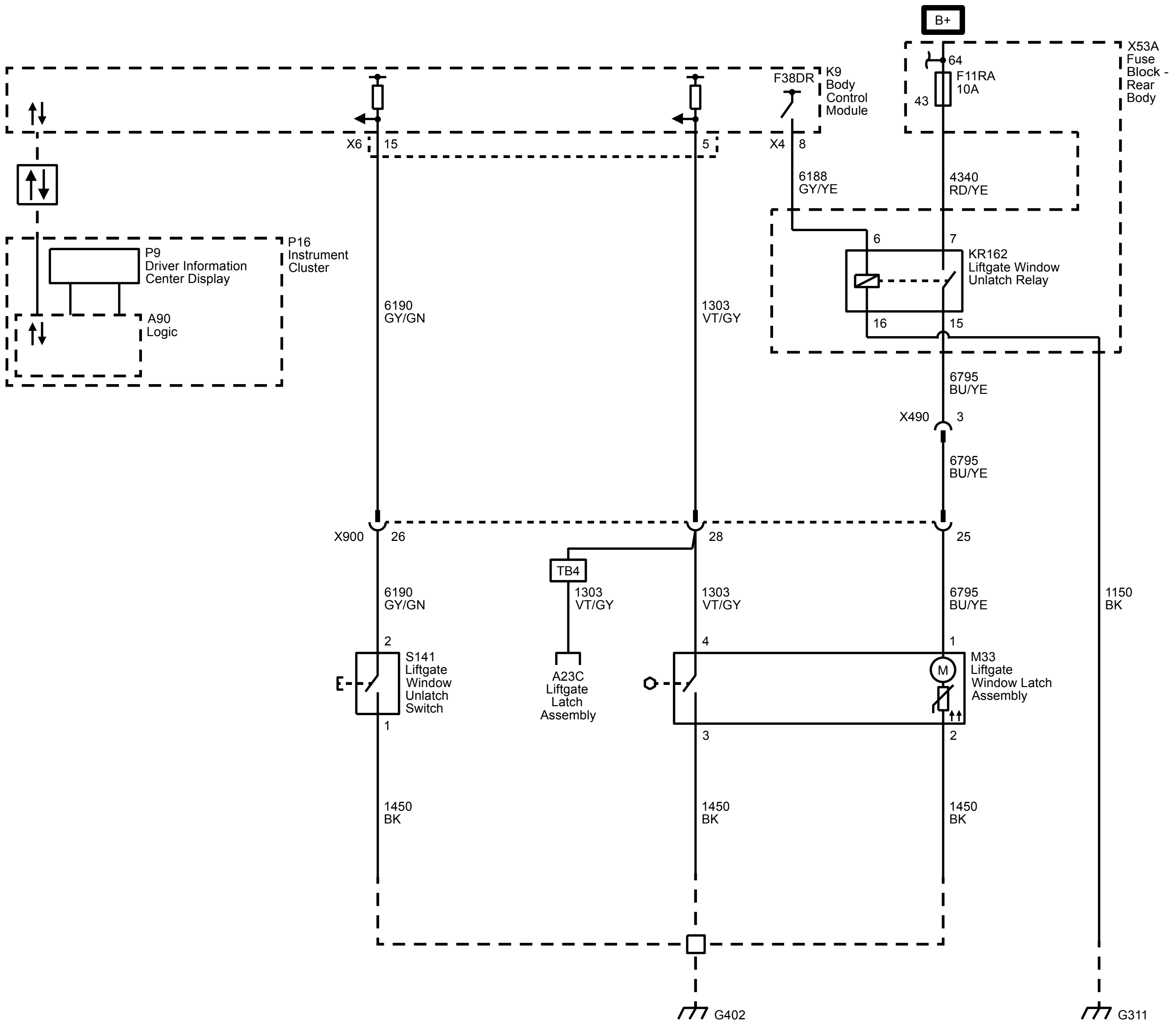
Body Systems

Vehicle Access

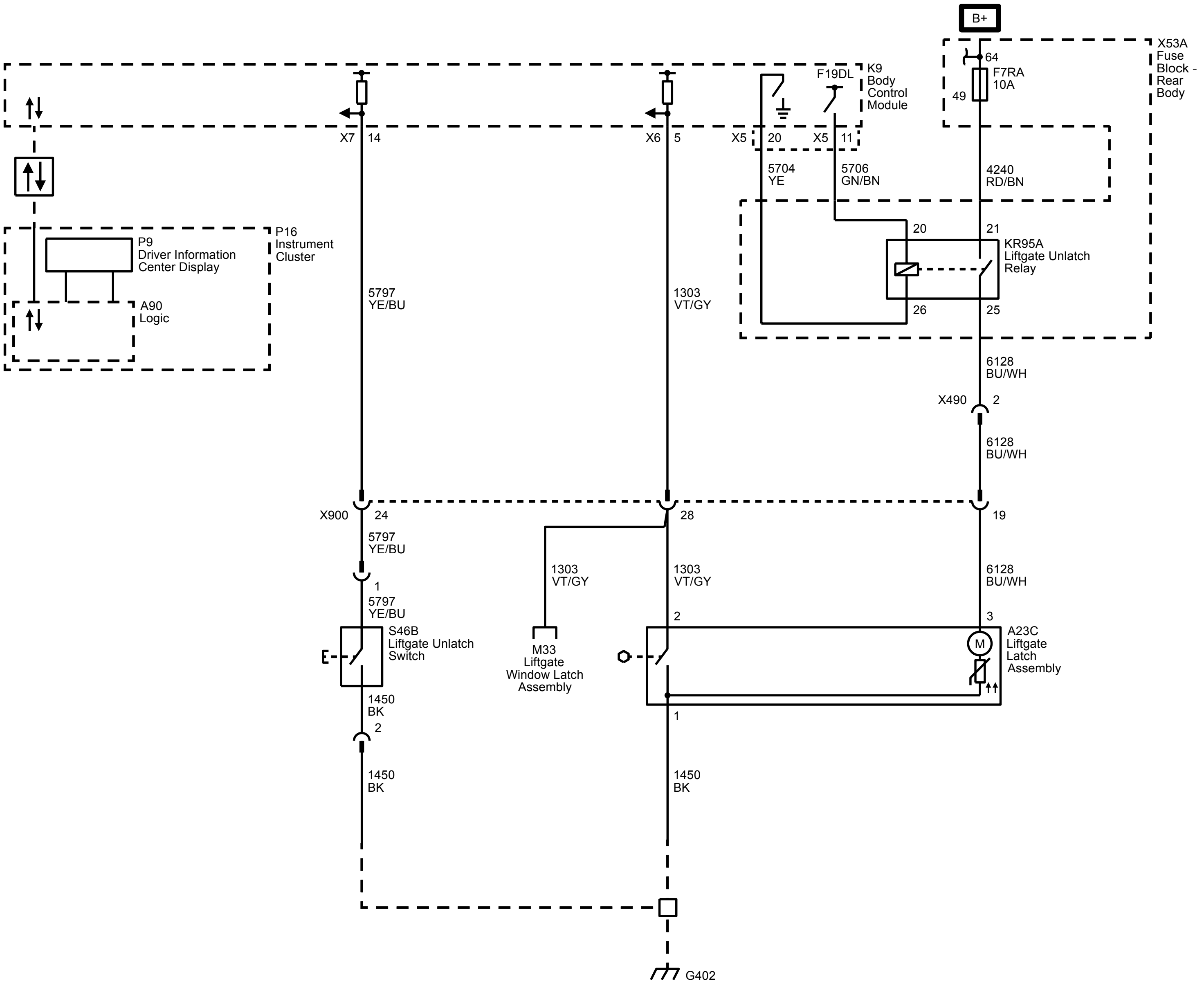
Schematic and Routing Diagrams

Release Systems Schematics

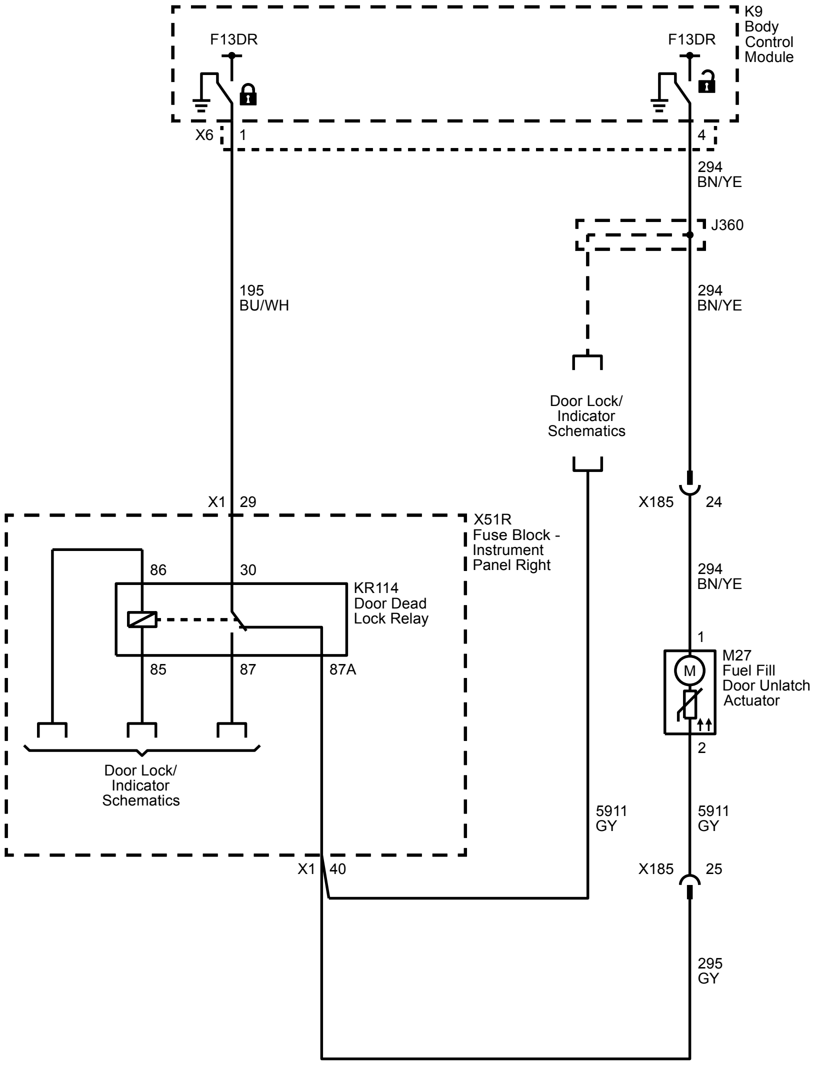
Liftglass Release


B+
X53A
Fuse
Block -
Rear
Body
64
F11RA
10A
43
F38DR
K9
Body
Control
Module
X6
15
5
X4
8
6188
GY/YE
4340
RD/YE
6
7
KR162
Liftgate Window
Unlatch Relay
16
15
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
6190
GY/GN
1303
VT/GY
6795
BU/YE
X490
3
6795
BU/YE
X900
26
28
25
TB4
6190
GY/GN
1303
VT/GY
1303
VT/GY
6795
BU/YE
1150
BK
2
S141
Liftgate
Window
Unlatch
Switch
1
A23C
Liftgate
Latch
Assembly
4
1
M
M33
Liftgate
Window Latch
Assembly
3
2
1450
BK
1450
BK
1450
BK
G402
G311

Liftgate Release (TB4)

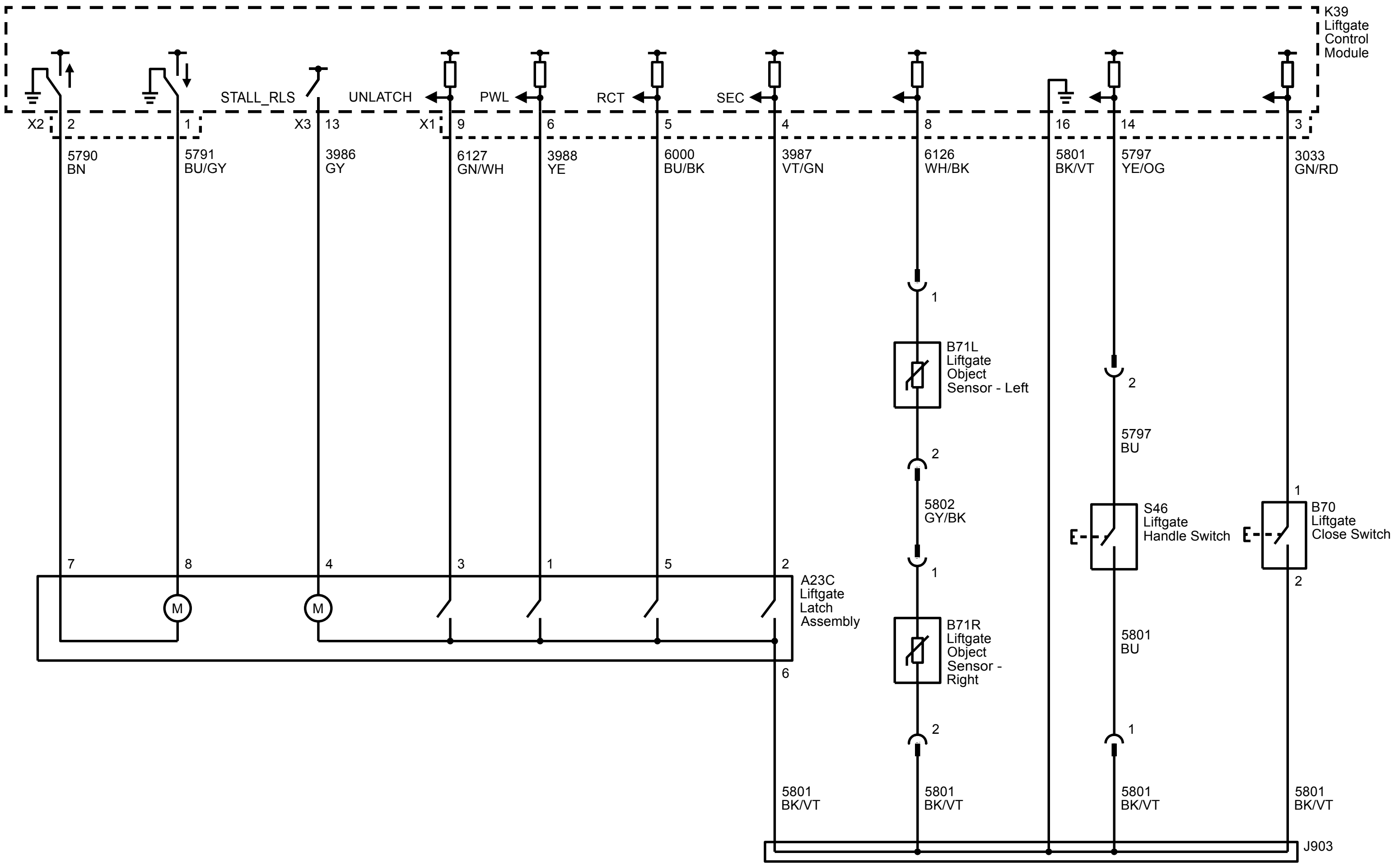

B+
X53A
Fuse
Block -
Rear
Body
64
F7RA
10A
49
K9
Body
Control
Module
F19DL
X7
14
X6
5
X5
20
X5
11
5704
YE
5706
GN/BN
4240
RD/BN
20
21
KR95A
Liftgate Unlatch
Relay
26
25
6128
BU/WH
X490
2
6128
BU/WH
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
5797
YE/BU
1303
VT/GY
X900
24
28
19
5797
YE/BU
1
5797
YE/BU
1303
VT/GY
1303
VT/GY
6128
BU/WH
2
3
S46B
Liftgate Unlatch
Switch
M33
Liftgate
Window Latch
Assembly
M
A23C
Liftgate
Latch
Assembly
1450
BK
2
1
1450
BK
1450
BK
G402

Fuel Door Lock (N08)

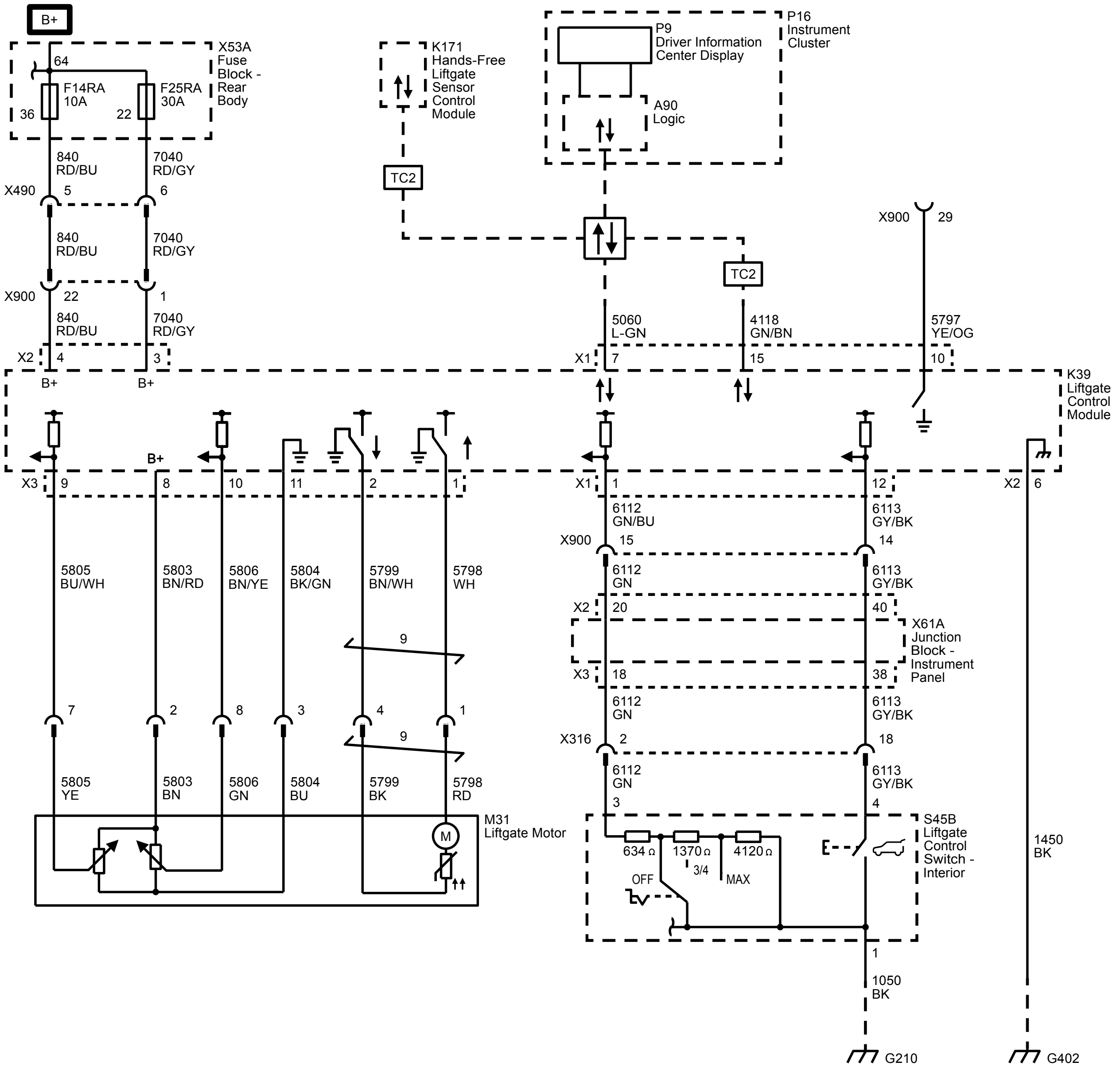

K9
Body
Control
Module
F13DR
F13DR
X6
1
4
294
BN/YE
J360
195
BU/WH
294
BN/YE
Door Lock/
Indicator
Schematics
X1
29
X185
24
X51R
Fuse Block -
Instrument
Panel Right
86
30
KR114
Door Dead
Lock Relay
294
BN/YE
1
M27
Fuel Fill
Door Unlatch
Actuator
M
85
87
87A
2
Door Lock/
Indicator
Schematics
5911
GY
5911
GY
X1
40
X185
25
295
GY

Liftgate Schematics

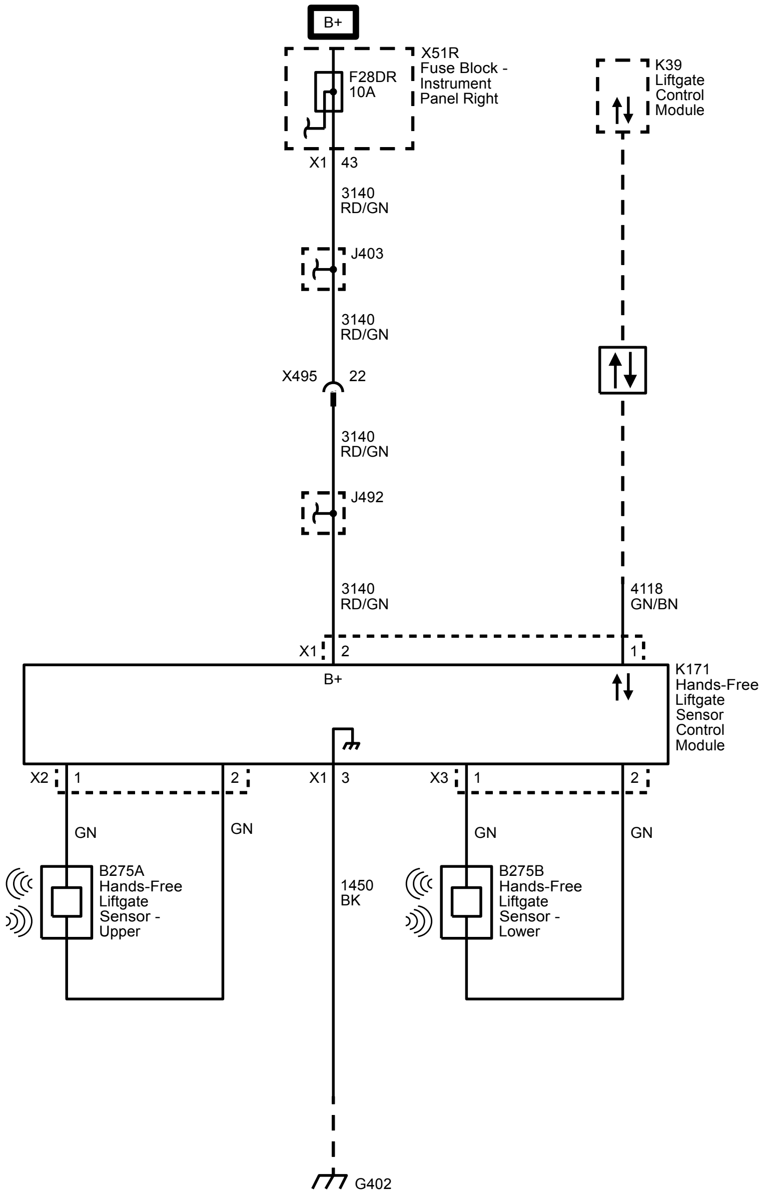
Liftgate Motors (TB5)


K39
Liftgate
Control
Module
STALL_RLS
UNLATCH
PWL
RCT
SEC
X2
2
1
X3
13
X1
9
6
5
4
8
16
14
3
5790
BN
5791
BU/GY
3986
GY
6127
GN/WH
3988
YE
6000
BU/BK
3987
VT/GN
6126
WH/BK
5801
BK/VT
5797
YE/OG
3033
GN/RD
1
B71L
Liftgate
Object
Sensor - Left
2
5802
GY/BK
1
B71R
Liftgate
Object
Sensor -
Right
2
2
5797
BU
S46
Liftgate
Handle Switch
5801
BU
1
1
B70
Liftgate
Close Switch
2
7
8
4
3
1
5
2
M
M
A23C
Liftgate
Latch
Assembly
6
5801
BK/VT
5801
BK/VT
5801
BK/VT
5801
BK/VT
J903

Liftgate Controls (TB5)


B+
X53A Fuse Block - Rear Body
64
F14RA 10A
F25RA 30A
36
22
840 RD/BU
7040 RD/GY
X490
5
6
840 RD/BU
7040 RD/GY
X900
22
1
840 RD/BU
7040 RD/GY
X2
4
3
B+
B+
K171 Hands-Free Liftgate Sensor Control Module
TC2
P9 Driver Information Center Display
P16 Instrument Cluster
A90 Logic
TC2
5060 L-GN
4118 GN/BN
X900
29
5797 YE/OG
X1
7
15
10
K39 Liftgate Control Module
B+
X3
9
8
10
11
2
1
X1
1
12
X2
6
5805 BU/WH
5803 BN/RD
5806 BN/YE
5804 BK/GN
5799 BN/WH
5798 WH
9
7
2
8
3
4
1
9
5805 YE
5803 BN
5806 GN
5804 BU
5799 BK
5798 RD
M
M31 Liftgate Motor
6112 GN/BU
6113 GY/BK
X900
15
14
6112 GN
6113 GY/BK
X2
20
40
X61A Junction Block - Instrument Panel
X3
18
38
6112 GN
6113 GY/BK
X316
2
18
6112 GN
6113 GY/BK
3
4
S45B Liftgate Control Switch - Interior
634 Ω
1370 Ω
4120 Ω
3/4
OFF
MAX
1
1050 BK
1450 BK
G210
G402

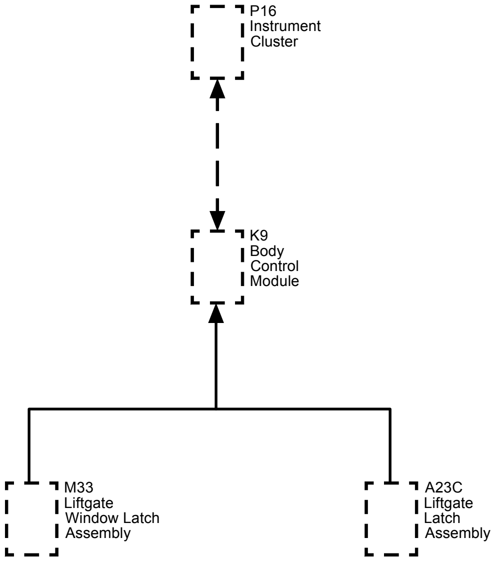
Hands Free Liftgate Controls (TC2)


B+
X51R
Fuse Block -
Instrument
Panel Right
F28DR
10A
X1
43
3140
RD/GN
J403
3140
RD/GN
X495
22
3140
RD/GN
J492
3140
RD/GN
K39
Liftgate
Control
Module
4118
GN/BN
X1
2
1
B+
K171
Hands-Free
Liftgate
Sensor
Control
Module
X2
1
2
X1
3
X3
1
2
GN
GN
GN
GN
B275A
Hands-Free
Liftgate
Sensor -
Upper
1450
BK
B275B
Hands-Free
Liftgate
Sensor -
Lower
G402

Description and Operation

Liftgate Ajar Indicator Description and Operation

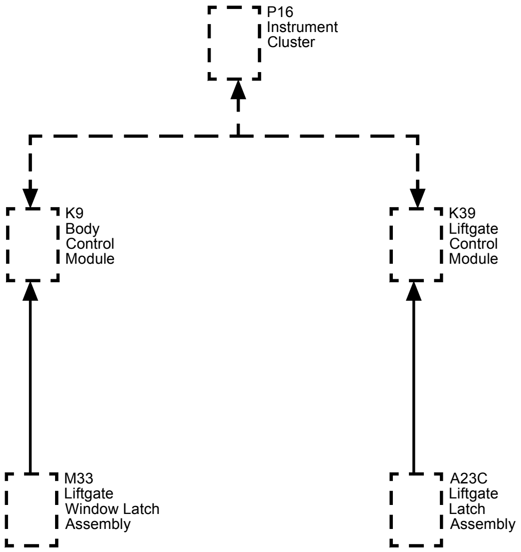
Liftgate-Liftglass Ajar Indicator without TB5


P16
Instrument
Cluster
K9
Body
Control
Module
M33
Liftgate
Window Latch
Assembly
A23C
Liftgate
Latch
Assembly

Manual Liftgate

The body control module supplies a 12V signal to the liftgate/liftglass ajar signal circuit. The liftgate and liftglass ajar switches are normally open when the liftgate or liftglass is fully closed. When the liftgate or liftglass is opened, the ajar switch contacts close providing a path to ground. The instrument cluster receives a serial data message from the body control module indicating the liftgate ajar status and the driver information center will display the REAR ACCESS OPEN message.

Liftgate-Liftglass Ajar Indicator with TB5


P16
Instrument
Cluster
K9
Body
Control
Module
K39
Liftgate
Control
Module
M33
Liftgate
Window Latch
Assembly
A23C
Liftgate
Latch
Assembly

Power Liftgate

The driver information center illuminates the Rear Access Open message when the liftgate module detects the liftgate ratchet and the liftgate sector switches are closed to ground indicating the liftgate is open. The instrument cluster receives a serial data message from the liftgate module indicating the liftgate ajar status.

The body control module supplies a 12V signal to the liftglass ajar circuit. The liftglass ajar switch is normally open when the liftglass is fully closed. When the liftglass is opened, the ajar switch contacts close providing a path to ground. The instrument cluster receives a serial data message from the body control module indicating the liftgate ajar status and the driver information center will display the REAR ACCESS OPEN message.

Liftgate Description and Operation

System Description

The power liftgate system consists of the following components:

- Liftgate control module
- Liftgate position sensor (part of the power assist actuator)
- Interior liftgate rotary switch
- Liftgate handle switch
- Liftgate close switch
- Liftgate latch assembly
- Liftgate power assist actuator
- Left and right liftgate object sensors
- Hands free liftgate sensor control module
- Upper and lower liftgate hands free sensors
- Keyless entry transmitter
- Remote control door lock receiver

Operation

The power liftgate can be commanded to power open and power close by the following methods:

- An open or close command from the interior liftgate rotary switch
- An open command from the liftgate handle switch
- A close command from the liftgate close switch
- An open or close request by a signal from the keyless entry transmitter to the remote control door lock receiver
- The kicking motion of a foot and lower leg under the rear fascia – Sensor location may vary depending upon make and model, refer to owner’s manual for the location of the sensors

The liftgate control module will respond to a request by commanding the liftgate latch to release the liftgate and activate the liftgate motor in the liftgate power assist actuator and raise the liftgate to the open position or to lower and cinch the liftgate closed.

Power Latch

The liftgate control module continuously monitors power liftgate operation and calculates its location and direction of travel from an liftgate position sensor (part of the power assist actuator). One input returns the position of the liftgate relative to the x-axis and y-axis. The liftgate control module then uses these 2 inputs together to calculate its angle relative to the liftgate. The interior liftgate rotary switch contains resistors which will incrementally drop the voltage level in the signal circuit as the switch rotated from the OFF position to the ¾ position or the MAX position, the liftgate control module will detect the change in voltage and will monitor the x-axis and y-axis as the liftgate is in motion to stop the liftgate parallel to the vehicle roof if the rotary switch is in the ¾ setting or to open fully if the rotary switch is in the MAX setting.

The liftgate latch assembly is a bi-directional motor and latch or unlatch operation is the result of the direction of the motor rotation. The liftgate control module controls the liftgate latch assembly through the control circuits by supplying power and ground in the appropriate polarity. The motor control circuits are monitored by the liftgate control module prior to activation for a high or low condition and during motor operation for an insufficient current flow condition. The ratchet, pawl, and sector switches are part of the liftgate latch assembly and are used by the liftgate control module to determine the state of the latch during the process of latching or unlatching. Each of the latch switch signal circuits are supplied battery voltage and monitored within the liftgate control module. The latch switches share a common low reference circuit from the liftgate control module and when the switch contacts close the signal circuit goes low and the liftgate control module determines the switch to be active.

The liftgate handle switch and liftgate close switch signal circuit are each supplied battery voltage by the liftgate control module. The switches share a common low reference circuit from the liftgate control module and when the switch is pressed the contacts close and the appropriate signal circuit goes low, the liftgate control module will detect the voltage drop and will command the liftgate to release and power open or to power close.

For vehicles without the optional passive keyless entry, when the liftgate handle switch is pressed, the liftgate control module will check the status of the vehicle door locks by sending a serial data message to the body control module requesting the door lock status. If the vehicle doors are locked, the liftgate control module will ignore the signal from the liftgate handle switch. If the vehicle doors are unlocked, the liftgate control module will permit the liftgate to unlatch and power open when the liftgate handle switch is pressed.

For vehicles with the optional passive keyless entry system, the keyless entry control module monitors the proximity of the keyless entry transmitter. If the liftgate handle switch is pressed and the keyless entry transmitter is within range, the keyless entry control module will send a serial data message to the liftgate control module indicating the presence of the keyless entry transmitter and the liftgate control module will permit the liftgate to unlatch and power open. If the doors are locked and the keyless entry transmitter is not within range, the liftgate control module will ignore the signal from the liftgate handle switch.

Liftgate Hands Free Sensor

The sensors are located behind the rear fascia (location may vary depending upon make and model, refer to owner’s manual for the location of the sensors) and is designed to detect the motion of the operator’s foot by way of a kicking motion. When the keyless entry transmitter is within 3 feet (1 meter) of the liftgate and the operator kicks his or her foot under the rear fascia, the sensors will detect the motion of the foot and the lower leg and if the procedure has been performed correctly the hands free liftgate sensor control module will send a serial data message to the liftgate control module. The tail lamps will then flash to indicate that the command has been received and the liftgate will power open or power close.

Object Detection

The power liftgate system uses an object detection method which consists of object sensors fixed to both sides of the liftgate near the seal area. The object sensors consist of an internal fixed resistor and normally open switch contacts which when closed will bypass the resistor. The signal circuit is supplied 5 V through a resistor and monitored within the liftgate control module, and during normal power liftgate operation the signal circuit should remain a fixed value. When an object presses one of the sensors the contacts close and the resistor is bypassed causing the signal circuit voltage at the module to go low. If the liftgate is being power closed at that time, the liftgate control module will command the power liftgate to reverse direction. All power close liftgate operations will be suspended until the obstruction pressing on the object sensor is removed

Manual Liftgate Operation

The operator has the option to disable the power liftgate operations by selecting the “OFF” position on the interior liftgate rotary switch. The releasing and cinching for the liftgate latch will function normally, however, the operator must manually pull the liftgate open and push the liftgate closed. All power liftgate operations will be suspended for as long as the liftgate rotary switch is in the “OFF” position.

Power Door Locks Description and Operation

Door Lock System Components

The power door lock system consists of the following components:

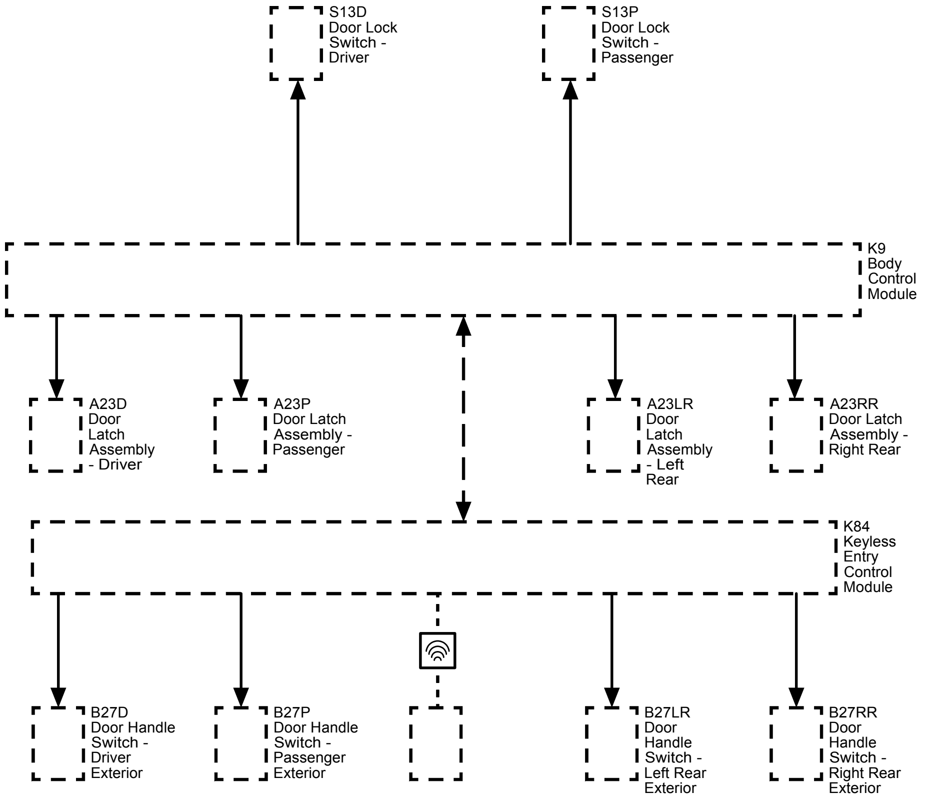
- Driver door lock switch
- Driver door key cylinder switch (Part of the driver door latch assembly)
- Child door lockout switch (Part of the driver window switch)
- Passenger door lock switch
- Front door lock actuators
- Rear door lock actuators
- Body control module (BCM)
- Keyless entry control module
- Exterior door handle switches
- Right instrument panel fuse block (Contains child security lock disable PCB relay and/or door dead lock PCB relay)

Door Lock System Controls

The power door lock system can be controlled by any of the following:

- A door lock switch LOCK or UNLOCK activation
- A key cylinder switch unlock activation
- A keyless entry transmitter activation
- Pressing the driver door lock plunger flush with the door panel will lock all doors

Power Door Locks Block Diagram


S13D Door Lock Switch - Driver
S13P Door Lock Switch - Passenger
K9 Body Control Module
A23D Door Latch Assembly - Driver
A23P Door Latch Assembly - Passenger
A23LR Door Latch Assembly - Left Rear
A23RR Door Latch Assembly - Right Rear
K84 Keyless Entry Control Module
B27D Door Handle Switch - Driver Exterior
B27P Door Handle Switch - Passenger Exterior
B27LR Door Handle Switch - Left Rear Exterior
B27RR Door Handle Switch - Right Rear Exterior

Door Lock Operation

When the doors have been locked, the passengers inside the vehicle can still open the doors by using the interior door handle (except vehicles with the child locks engaged or dead locks engaged). Pulling the interior door handle the first time will unlock the door and pulling the interior door handle a second time will unlatch the door.

The BCM supplies a 12 volt signal to the lock and unlock signal circuits of the driver and passenger door lock switches. When the appropriate switch is pressed, a contact within the door lock switch closes providing a ground path for the signal circuit. The BCM will detect the voltage drop in the signal and will command the doors to perform the lock or unlock functions.

The driver door latch contains 2 internal switches and 2 signal circuits that are monitored by the BCM. One switch is controlled by the driver key cylinder switch, when the key is turned to the unlock position, a switch will close and the BCM will command the remaining doors to UNLOCK. The other switch is controlled by the driver door lock plunger, pressing the plunger flush with the door panel will close the switch, the switch will close and the BCM will command the remaining doors to LOCK

The BCM may also receive a LOCK or UNLOCK command from the keyless entry control module, refer to Keyless Entry System Description and Operation (With ATH)Keyless Entry System Description and Operation (Without ATH) for information on the keyless entry system

The BCM, upon receipt of a lock switch lock or unlock signal, will supply voltage to the door lock actuator lock or unlock control circuits. Since the opposite side of the lock actuator is connected to ground through the other lock actuator control circuit, the doors will then lock or unlock as commanded.

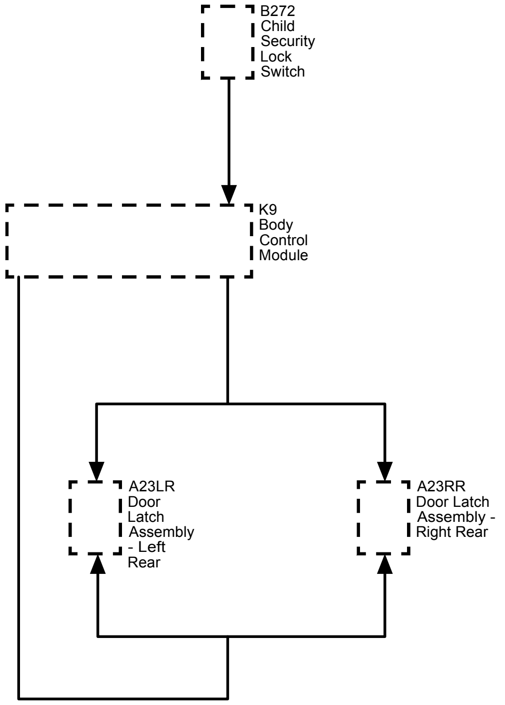
The following three circuits are used to operate the lock:

- Driver door unlock
- Passenger doors unlock
- All doors lock

Passive Door Lock/Unlock Operation

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signal within the signal circuit is pulled to ground. The keyless entry control module will detect the voltage drop and a low frequency antenna will transmit a challenge to the keyless entry transmitter. If the challenge is met, the keyless entry transmitter will respond, and the keyless entry control module will send a serial data message to the body control module to command the door(s) to be locked or unlocked

Power Door Child Lock Block Diagram


B272 Child Security Lock Switch
K9 Body Control Module
A23LR Door Latch Assembly - Left Rear
A23RR Door Latch Assembly - Right Rear

Child Security Lockout System Operation

The child door lockout switch on the driver window switch controls the child locks on the rear doors. The lockout switch is an input to the body control module and the body control module controls the door lock security relay. When the body control module receives a command from the child door lockout switch, it will apply voltage to the child security lock disable relay coil, this will energize the relay and the contact within the relay will then direct the voltage to activate the left rear and right rear child locks and then isolate them from the normal door lock system to prevent the rear doors from being opened by using the interior rear door handles. An indicator will also illuminate to alert the driver that the child lockout system has been activated. Pushing the switch again will return normal function to the rear interior door handles and the indicator will go out.

The body control module monitors the voltage level of the child security motor status signal circuit, when the child locks have been activated, the contacts of the child security motor status switch (internal to the rear door latch) will close providing a ground path for the signal circuit pulling the voltage low. It is in this manner that the body control module is able to determine if the rear door latch has been successfully been locked out.

The body control module monitors the status of the child security lockout system, when the body control module detects a fault in the system, it will command the child lockout indicator to flash ON and OFF for 30 seconds to alert the driver that the child security lockout system may not be functioning properly.

The body control module will command the child lockout indicator to flash ON and OFF for the following reasons:

- An open/high resistance in either child security motor status signal circuit
- The body control module detects that one or both rear door latches have not activated and are not locked out
- The body control module detects a short to ground or an open/high resistance in the child security lock disable relay control circuit
- A malfunctioning child security lock disable relay
- An open/high resistance in the child security lock motor control circuit

Power Door Lock Deadlock Operation

Some vehicles may be equipped with the deadlock security feature which includes an additional reversible deadlock motor contained within each door latch assembly. Each deadlock motor is wired to the BCM through 2 control circuits; the door lock deadlock control circuit and the door lock actuator unlock control circuit. To lock the door with deadlock, the door locks are activated by momentarily applying voltage to the door lock deadlock control circuits, and ground to the door lock actuator unlock control circuits. Ground to the deadlock actuators is provided through the door lock actuator unlock control circuits. Once the doors are locked with deadlock, the mechanical lock/unlock linkage within the door lock actuator is physically disconnected so that the door can not be manually unlocked and disables the functions of the interior door handles. If the content theft feature is armed at the same time, the interior door lock switches will not operate the locks.

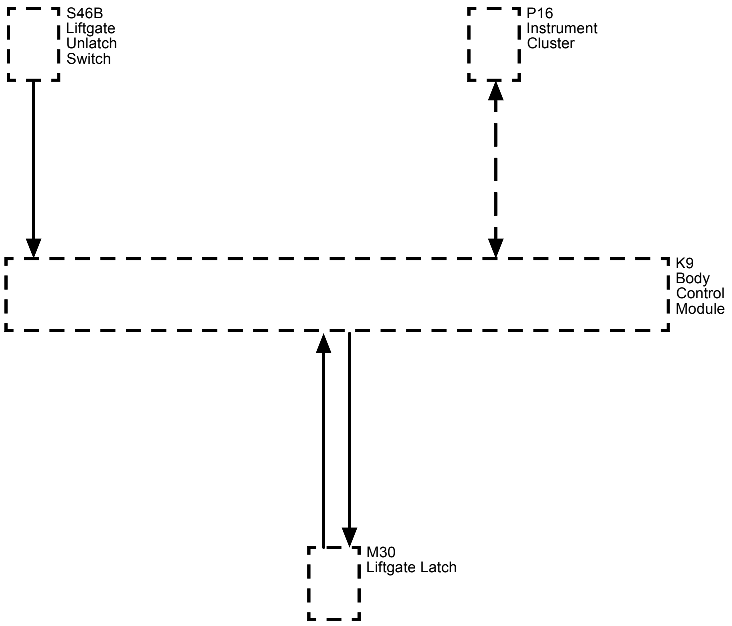
To restore the interior door handle functions, the BCM unlocks the doors by momentarily applying ground to the deadlock motor unlock control circuit. This energizes the rear door unlock relay coil causing voltage to flow through the switch contacts to the door lock and deadlock motors. Ground for both motors is supplied through the door lock motor lock circuit through the normally closed contacts of the lock relay to ground.

Rear Hatch/Gate Description and Operation

Liftgate Release System Components

- Body control module (BCM)
- Liftgate unlatch switch
- Liftgate window unlatch switch
- Liftgate latch assembly
- Liftgate window latch assembly
- Liftgate window unlatch relay
- Liftgate unlatch relay

Liftgate Release Block Diagram



Liftgate Release Operation

Liftgate Unlatch Switch

The BCM monitors supplies a 12 V signal to the liftgate unlatch switch so that when the switch is pressed, the voltage within the signal circuit is pulled low and in response, the BCM will detect the voltage drop and check the status of the door lock system. If the doors are locked, the BCM will ignore the request, if the All Doors Unlocked has been commanded, the BCM will recognize the request and command the liftgate to release.

Liftgate Latch

When BCM receives a liftgate release command from the liftgate unlatch switch, the BCM applies voltage and ground to the liftgate unlatch relay control circuit, which energizes the coil side of the relay. The switch side of the release relay then momentarily closes, supplying a brief pulse of battery positive voltage to the liftgate latch. The liftgate latch is continuously grounded and when it receives the voltage pulse, it will become energized and the latch will activate releasing the liftgate so that it may be manually raised to an open position.

Keyless Entry Transmitter

The BCM may also get a rear compartment release command from the remote keyless entry module. When the liftgate button is pressed on the keyless entry transmitter, a liftgate release request is sent to the remote keyless entry module, the remote keyless entry module will then send a serial data message to the BCM to command the release of the liftgate.

Liftgate Window

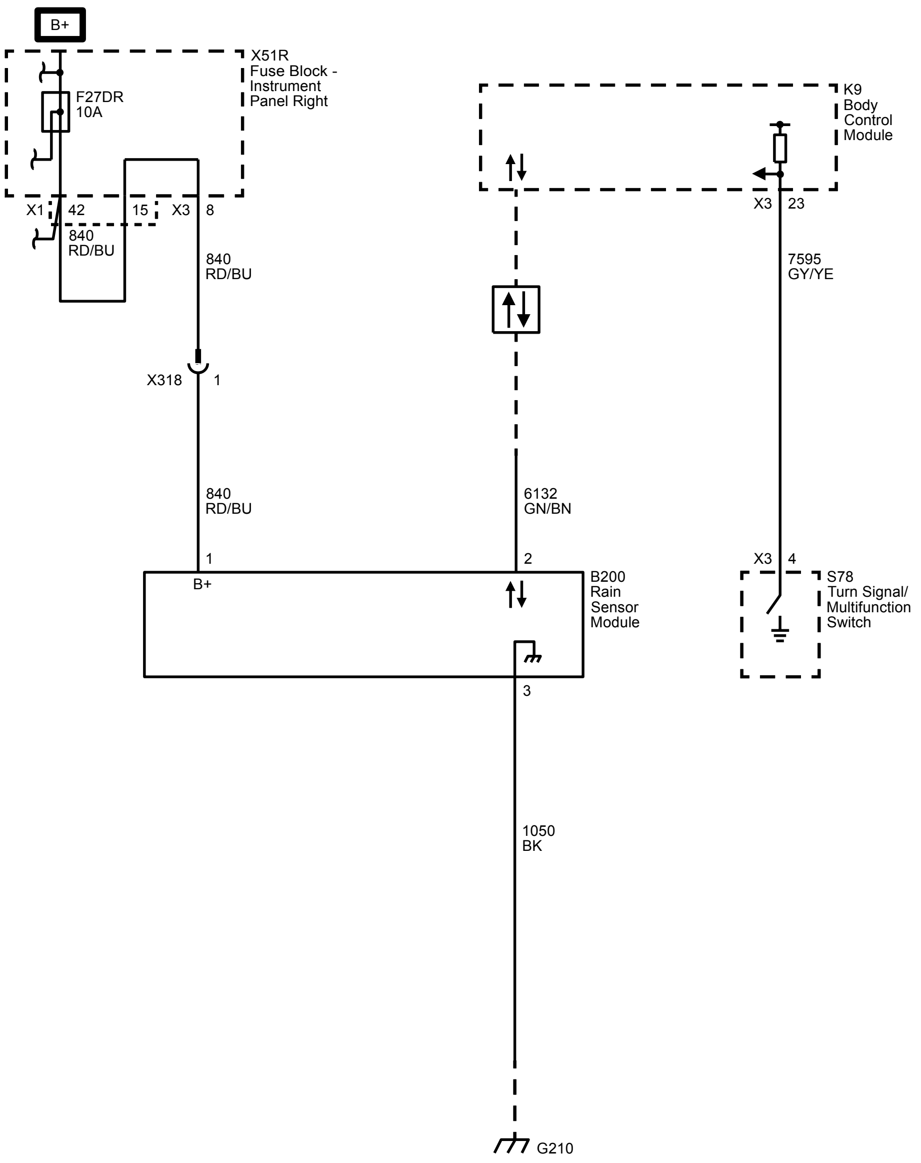
Liftgate Window Unlatch Switch

The BCM monitors supplies a 12 V signal to the liftgate window unlatch switch so that when the switch is pressed, the voltage within the signal circuit is pulled low and in response, the BCM will detect the voltage drop and check the status of the door lock system. If the doors are locked, the BCM will ignore the request, if the All Doors Unlocked has been commanded, the BCM will recognize the request and command the liftgate window to release.

Liftgate Window Latch

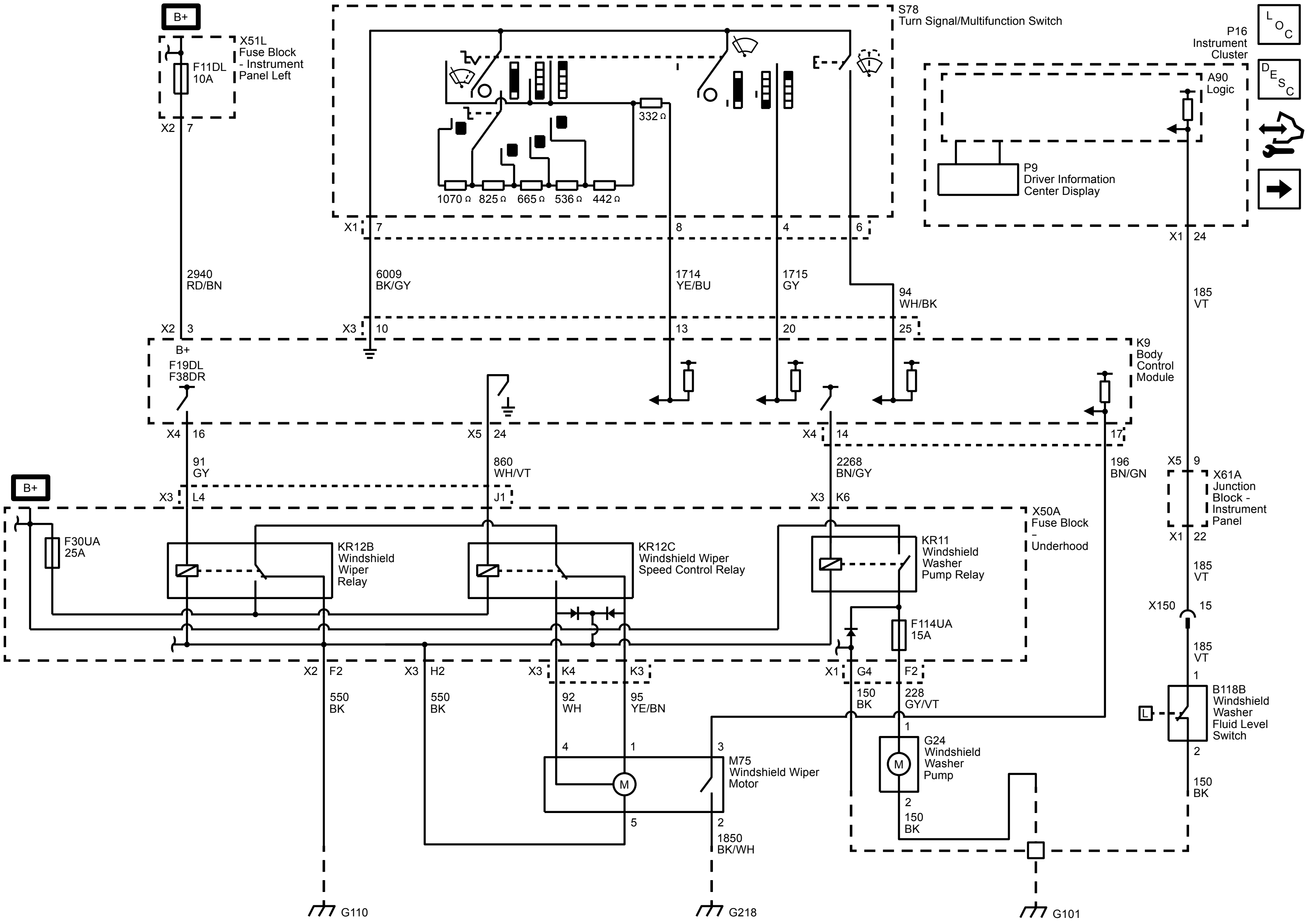
When BCM receives a liftgate window release command from the liftgate window unlatch switch, the BCM applies voltage to the liftgate window unlatch relay control circuit, which energizes the coil side of the relay. The switch side of the liftgate window unlatch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the liftgate window latch. The liftgate window latch is continuously grounded and when it receives the voltage pulse, it will become energized and the latch will activate releasing the liftgate window so that it may be manually raised to an open position.

Rain Sense

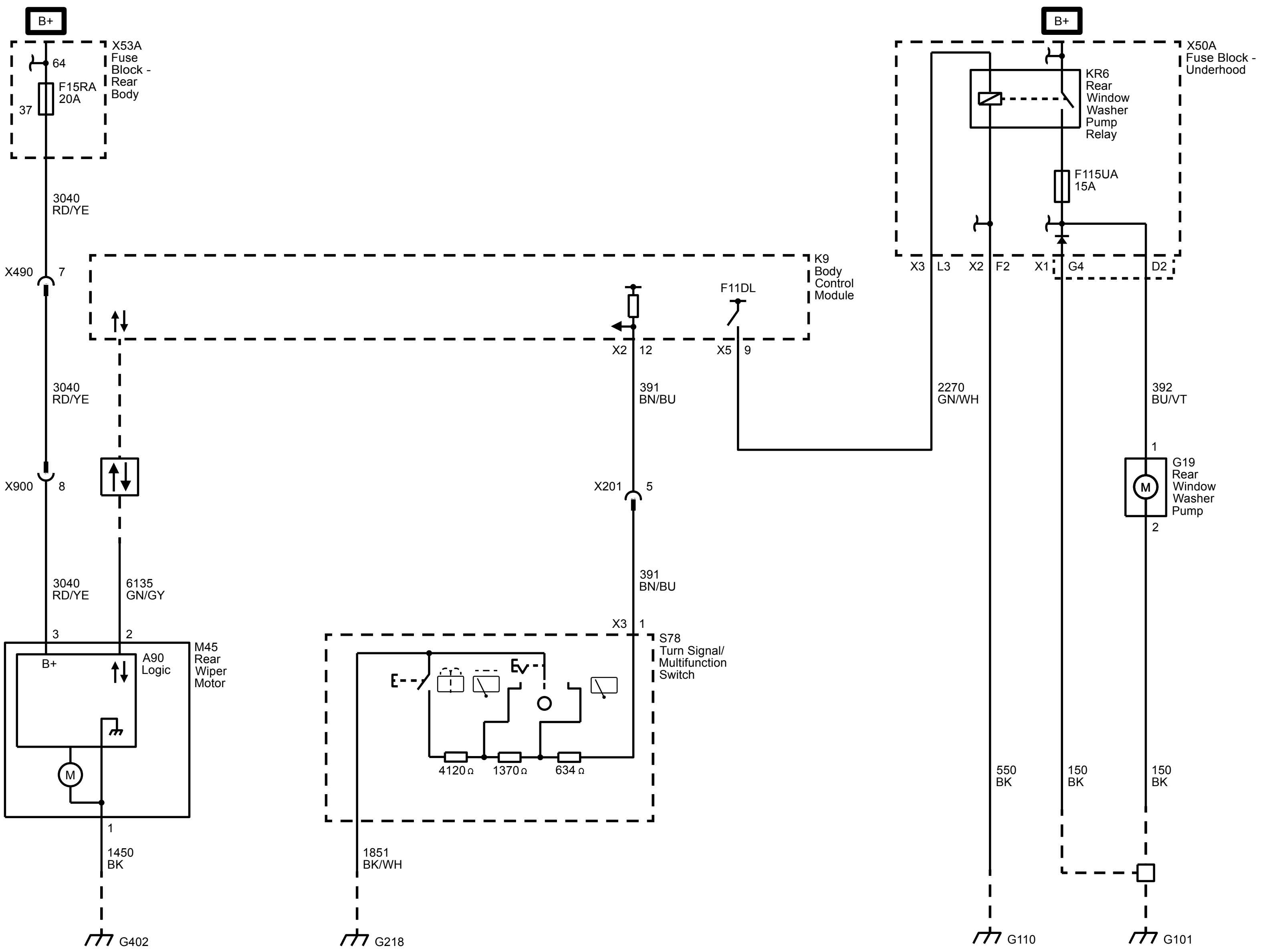


B+
X51R
Fuse Block - Instrument Panel Right
F27DR
10A
X1
42
15
X3
8
840
RD/BU
840
RD/BU
X318
1
840
RD/BU
1
B+
K9
Body Control Module
X3
23
7595
GY/YE
6132
GN/BN
2
B200
Rain Sensor Module
3
1050
BK
G210
X3
4
S78
Turn Signal/ Multifunction Switch

Front Wiper Motor and Washer Pump


B+
X51L
Fuse Block
- Instrument
Panel Left
F11DL
10A
X2
7
S78
Turn Signal/Multifunction Switch
332 Ω
1070 Ω
825 Ω
665 Ω
536 Ω
442 Ω
X1
7
8
4
6
P16
Instrument
Cluster
A90
Logic
P9
Driver Information
Center Display
X1
24
2940
RD/BN
6009
BK/GY
1714
YE/BU
1715
GY
94
WH/BK
185
VT
X2
3
X3
10
13
20
25
K9
Body
Control
Module
B+
F19DL
F38DR
X4
16
X5
24
X4
14
17
91
GY
860
WH/VT
2268
BN/GY
196
BN/GN
X5
9
X61A
Junction
Block -
Instrument
Panel
X1
22
B+
X3
L4
J1
X3
K6
X50A
Fuse Block
-
Underhood
F30UA
25A
KR12B
Windshield
Wiper
Relay
KR12C
Windshield Wiper
Speed Control Relay
KR11
Windshield
Washer
Pump Relay
F114UA
15A
185
VT
X150
15
185
VT
X2
F2
X3
H2
X3
K4
K3
X1
G4
F2
550
BK
550
BK
92
WH
95
YE/BN
150
BK
228
GY/VT
1
B118B
Windshield
Washer
Fluid Level
Switch
L
4
1
3
M75
Windshield Wiper
Motor
M
1
G24
Windshield
Washer
Pump
M
2
2
150
BK
150
BK
5
2
1850
BK/WH
G110
G218
G101
LOC
DESC

Rear Wiper Motor and Washer Pump


B+
X53A
Fuse
Block -
Rear
Body
64
F15RA
20A
37
3040
RD/YE
X490
7
K9
Body
Control
Module
F11DL
X2
12
X5
9
3040
RD/YE
391
BN/BU
2270
GN/WH
X900
8
X201
5
3040
RD/YE
6135
GN/GY
391
BN/BU
3
2
B+
A90
Logic
M45
Rear
Wiper
Motor
M
1
1450
BK
G402
X3
1
S78
Turn Signal/
Multifunction
Switch
4120 Ω
1370 Ω
634 Ω
1851
BK/WH
G218
B+
X50A
Fuse Block -
Underhood
KR6
Rear
Window
Washer
Pump
Relay
F115UA
15A
X3
L3
X2
F2
X1
G4
D2
392
BU/VT
1
G19
Rear
Window
Washer
Pump
M
2
550
BK
150
BK
150
BK
G110
G101

Description and Operation

Wiper/Washer System Description and Operation

Wiper/Washer System Components

The wiper/washer system consists of the following electrical components:

- Windshield Wiper Relay
- Windshield Wiper Speed Control Relay
- Windshield Washer Pump Relay
- Windshield Washer Fluid Pump
- Windshield Wiper Motor
- Window Wiper/Washer Switch
- Windshield Wiper Motor Fuse
- Windshield Washer Fluid Pump Fuse
- Body Control Module
- Rear Window Wiper Motor
- Rear Window Wiper Motor Fuse
- Rear Window Wiper Relay
- Rear Window Washer Pump Relay
- Windshield Washer Fluid Level Switch
- Rain Sensor

Windshield Wiper System

The body control module (BCM) determines the front wipe/wash system mode of operation by monitoring several signals from the front wipe/wash switch as indicated in the wiper switch.

The front wipe/wash switch receives a reference ground signal from the BCM. Each input of the BCM provides a switched battery pull-up for each front wiper/washer switch output signal it receives. All the BCM inputs are recognized as active when the wiper switch provides a path to the referenced ground signal. The first signal received by the BCM is the result of 6 resistors in the front wiper switch configured as a resistor ladder network. This signal is connected to a BCM analog to digital input. Depending on the function selected (High, Low, Intermittent 1 thru 5, Mist, Off), the front wiper control switch connects a different set of resistors into the circuit resulting in different voltages appearing on the BCM A/D input. By monitoring this voltage, the BCM determines how to control the wiper motor On/Off Relay. It should be noted that High, Low, and Mist all have the same value on this signal circuit. The second signal received from the front wiper switch is active only when the front wiper switch is in the high speed wiper position. When the wiper switch is not in the high speed position, the switch is open and the signal circuit is pulled to battery by the BCM. When the wiper switch is in the high speed position, the switch pulls the circuit low. The BCM determines how to control the Wiper high/low speed relay from this input. The third signal received from the front wiper switch is from the momentary windshield wash control switch. When the washer switch is not active the switch is open and the signal circuit is pulled to battery by the BCM. When the washer switch is active, the switch pulls the circuit low. The BCM controls the windshield wash and windshield wash activated wiper operation based on this input.

The BCM controls front wiper motor operation through two output signals and the monitoring of one input signal. The two outputs (one high side drive, one low side drive) are used to control two external wiper motor relays: front wiper motor on/off relay: which provides the wiper motor with battery power when it is activated by the high side drive signal (switched battery) from the BCM. When left deactivated, the normally closed contacts provide a ground to the wiper motor. Wiper high/low speed relay: when activated by a low side drive signal (ground) from the BCM, it switches the power supplied by the wiper motors on/off relay to the motors high speed input. When left deactivated, the normally closed contacts connect the power supplied by the wiper motors on/off relay to the motors low speed input. The input used by the BCM is from the park switch located in the wiper motor assembly. When the wiper blades are not in the park position, the wiper park switch is open and the circuit is pulled up to battery by the BCM. When the wiper blades are in the park position at the bottom of the glass, the wiper park switch closes to ground pulling the park signal circuit low.

To initiate low speed operation, the BCM only energizes the front wiper motor on/off relay. This allows battery voltage from the wiper fuse to be applied through the switched contacts of the wiper motor on/off relay, through the normally closed contacts of the wiper high/low speed relay, to the low speed control circuit of the windshield wiper motor.

Redundant high speed switch pass through. The BCM provides redundant circuitry which places battery power on its wiper motor on/off relay output with activation of its low assertion high speed wiper switch input. The BCM shall be capable of doing this, even if the module has lost all microprocessor control. This redundant circuit shall supply power while in the RUN and CRANK power modes. however; while in the CRANK power mode, the pass through shall only be active if the BCM is NOT in a computer operating properly state.

To initiate high speed operation, the BCM energizes both the front wiper motor on/off relay and the wiper high/low speed relay . This allows battery voltage from the wiper fuse to be applied through the switched contacts of the wiper motor on/off relay, through the switched contacts of the wiper high/low speed relay, to the high speed control circuit of the windshield wiper motor.

Parking the wiper motor. In order to perform an accurate read of the park switch and to ensure the wipers will come to rest while still in the park position, parking of the wipers only occurs while in a low speed wiper mode. This requires that if the wipers are performing a high speed wiper operation at the time they are required to park, the BCM shall transition the Wipers to low speed by deactivating the wiper high/low relay before attempting to park. In order to park the wipers, the BCM monitors the park circuit until the park switch pulls the park circuit to ground. At this time, the BCM will immediately deactivate the wiper motor on/off relay. The relay contacts will switch back to their normally closed position and will apply ground to the wiper motor power inputs through the normally closed contacts of the wiper high/low relay. This deactivates and dynamically brakes the wiper motor in the park position. When the wiper switch is turned to the OFF position while the wiper motor is somewhere in mid-cycle, the BCM will continue to operate the motor until the wipers reach the park position. If the BCM is running the wiper motor and does not see a state transition of the park switch after 8 s, the wipers will stop immediately when the wiper switch is turned to OFF. If the ignition is turned OFF while the wipers are in mid-cycle, the wipers will stop immediately, regardless of position. The BCM will park the wipers next time the ignition is turned ON.

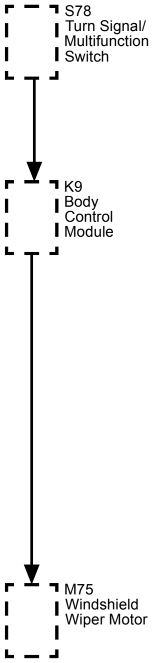
The windshield wiper system MIST operation is identical to LOW speed operation, except that the MIST switch is a press and release type switch. When the wiper switch is moved to the MIST position and released, low speed wiper motor operation is started and will continue until 1 cycle is complete. If the wiper switch is moved to the MIST position and held, the wiper motor will operate in the LOW speed mode until the switch is released.

Windshield wiper intermittent operation is a low speed wiper motor function with a variable delay interval between the wiper motor cycles. The duration of the delay is controlled by the front wiper control switches intermittent 1 thru intermittent 5 settings. The wiper operation is as follows

1. The BCM will initiate a single wipe by activating its front wiper ON/OFF relay output.

2. At the completion of a single wipe, the BCM will park the wipers as described above.
3. The BCM will then pause the wipers in their park position for the time duration associated with intermittent delay switch setting.
4. When the delay time expires repeat Steps 1 and 3 until the system is turned off or taken out of intermittent mode. If the wiper switch is moved from a longer delay interval to a shorter delay interval, the BCM will command an immediate wipe cycle and reset the delay timer to the shorter delay interval.

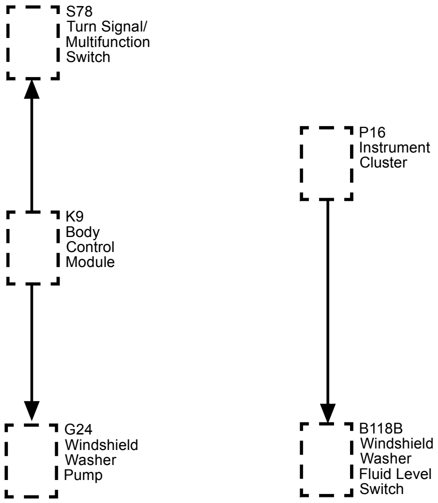
Intermittent wiper operation may be vehicle speed sensitive. When enabled, the speed compensated intermittent feature causes the intermittent wiper delay intervals to become shorter as a function of increased speed. As vehicle speed is reduced the intervals will become closer to the predetermined



Windshield Washer System

The BCM controls the windshield wash operation and windshield wash activated wiper operation. When the BCM detects the activation of the momentary windshield wash control switch, it activates its washer pump relay drive output which supplies battery power to the coil of the washer pump relay. This energizes the relay, which switches battery power to the pump motor. The BCM will also activate continuous low speed windshield wipes as described above. Upon deactivation of the windshield wash control switch, the wiper control module (BCM) shall deactivate the wash motor and will also park the wiper motor as described above unless the drip wipe feature is enabled. On some vehicles the drip wipe feature will be enabled and cause the system to provide additional wiping of the windshield after the switch has been released and fluid is no longer being applied. The front wash feature may attempt to detect a stuck switch. When enabled, activation of the wash feature shall be limited to 10 seconds.

On vehicles with the Rear Wash feature a single reversing wash motor may be utilized for both the front and rear wash operation. In this system the wash motor is operated in one direction to spray fluid on the front windshield and then operated in the reverse direction to spray fluid on the rear window. The BCM Controls the reversing wash motor through two High Side Drive outputs. One controls the Front Wiper Motor Relay and one controls the Rear Wiper Relay.



Washer Fluid Level Indicator

The check washer fluid message is controlled by the instrument panel using an input from the washer fluid level switch. The washer fluid level signal circuit is supplied ignition voltage through a resistor then monitored within the instrument cluster. The washer fluid level switch is normally open so the instrument cluster detects ignition voltage on the washer fluid level signal circuit whenever the washer fluid level is not low. When the washer fluid reaches the point where the driver should be informed that the washer fluid is low, the washer fluid level switch closes. When the washer fluid level switch is closed the washer fluid level signal circuit voltage is pulled low, and the instrument panel displays the Check Washer Fluid message on the driver information center. In order to prevent the Check Washer Fluid message from being displayed while sloshing is occurring in the washer fluid container, the instrument cluster is programed with a 1 min delay before changing states of the Check Washer Fluid message during an ignition cycle.

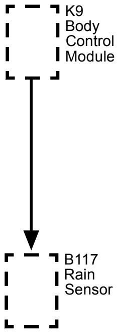
Rain Sensor Indicator

B+ voltage is supplied to the Rain Sensor. Whenever the ignition is ON, or accessory positions, the body control module (BCM), sends the turn signal/multifunction switch status by using data communication. When a wipe cycle is needed, the Rain Sensor sends a data communication message to the BCM, requesting the wiper operation. The BCM commands the Windshield Wiper Motor wipe cycles. If at anytime a fault occurs between the Rain Sensor and BCM, the BCM will use the inputs from the turn signal/multifunction switch in the delay positions to operate the Windshield Wiper Motor at continuous variable delay intervals.

The system supports the Rainsense On/Off button. Press to turn the Rainsense On/Off. When turned on and the front is in one of the Rain sensor wipe sensitivity positions, the wipers can be adjusted for more or less sensitivity to moisture. When turned off, the wipers operate as timed intermittent wipers and can be adjusted for more or less frequent wipes.

If the ignition is in ON/RUN and the front band is in one of the sensitivity settings when auto is turned on or off, a message may display indicating if Rain sensor was turned on or off.

If the ignition is in ON/RUN and the front is not in one of the sensitivity settings when auto is turned on, a message may display indicating that the wiper band must be in one of the sensitivity settings for Rain sensor to operate.

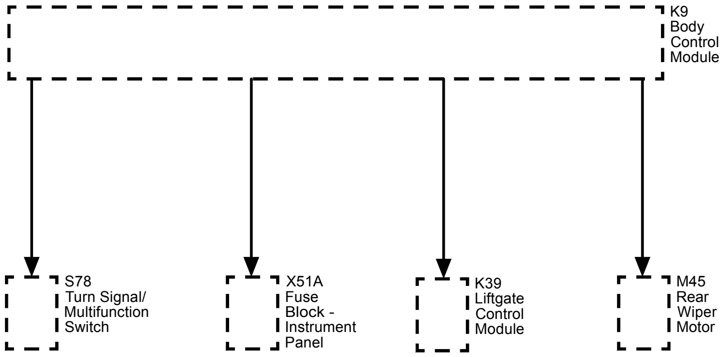


Rear Wiper System

On vehicles equipped with a Rear Wiper, the BCM determines of the Rear Wipe/Wash System Mode of Operation by monitoring the multiplexed output of the Rear Wipe/Wash Switch. The Rear Wipe Wash Switch uses a reference ground signal from the BCM. The BCM provides a switched Battery pull-up for the Rear Wiper/Washer Switch output signal it receives. All the BCM inputs are recognized as active when the Rear Wiper Switch provides a path to the referenced ground signal. The Rear Wiper/Washer signal received by the BCM is the result of 3 resistors in the Rear Wiper Switch configured as a resistor ladder network. This signal is connected to a BCM Analog to Digital Input which also provides a switched Battery pull-up for the circuit. Depending on the function selected (Low, Intermittent, Off, Wash), the Rear Wiper Control Switch connects a different set of resistors into the circuit resulting in different voltages appearing on the BCM A/D input. By monitoring this voltage, the BCM determines how to control the Rear Wiper Motor Relay and the Rear Washer Relay.

The BCM Controls the single speed Rear Wiper Motor by its Active High output to the external Rear Wiper Motor Relay. When the BCM activates its output and applies Battery to the coil of the relay, the relay energizes, allowing Battery voltage from the fuse to be applied through the switched contacts of the Rear Wiper Motor Relay to the Rear Wiper Motor's control input. The motor then operates continuously at low speed. The BCM does not control the parking of the Rear Wiper Motor, it is self parking. When the BCM deactivates its output, the contacts of the Rear Wiper Motor Relay switch back to ground which will be used by the wiper for Dynamic Braking. The Rear Wiper's internal park switch and circuitry will sustain motor operation until the wiper arm has returned to its Park position.

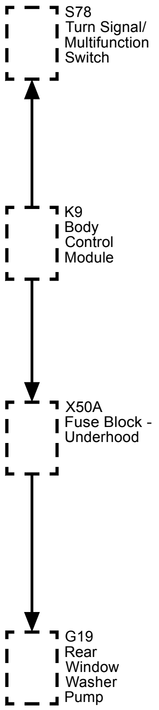
Rear Wiper Block Diagram


K9
Body
Control
Module
S78
Turn Signal/
Multifunction
Switch
X51A
Fuse
Block -
Instrument
Panel
K39
Liftgate
Control
Module
M45
Rear
Wiper
Motor

Rear Wash

When the Body Control Module detects that the Rear wiper/wash switch has activated the momentary Wash switch, it activates a High Side Drive output which supplies Battery to the coil of the Rear Washer Pump Relay. This energizes the Relay, which switches Battery Power to the Washer Pump Motor. The BCM will also activate continuous Low Speed Windshield Wipers as described above. The BCM software will attempt to detect a stuck Rear Wash Switch. A stuck Rear Wash Switch condition is detected if the Rear Wash Motor Relay Output has been continuously active for 10 seconds or more. Upon detecting this the BCM will fail soft the state of the Rear Wash Control to Inactive. This shall cause the System to perform as if the momentary Wash control had been released.

Rear Washer Block Diagram


S78
Turn Signal/
Multifunction
Switch
K9
Body
Control
Module
X50A
Fuse Block -
Underhood
G19
Rear
Window
Washer
Pump

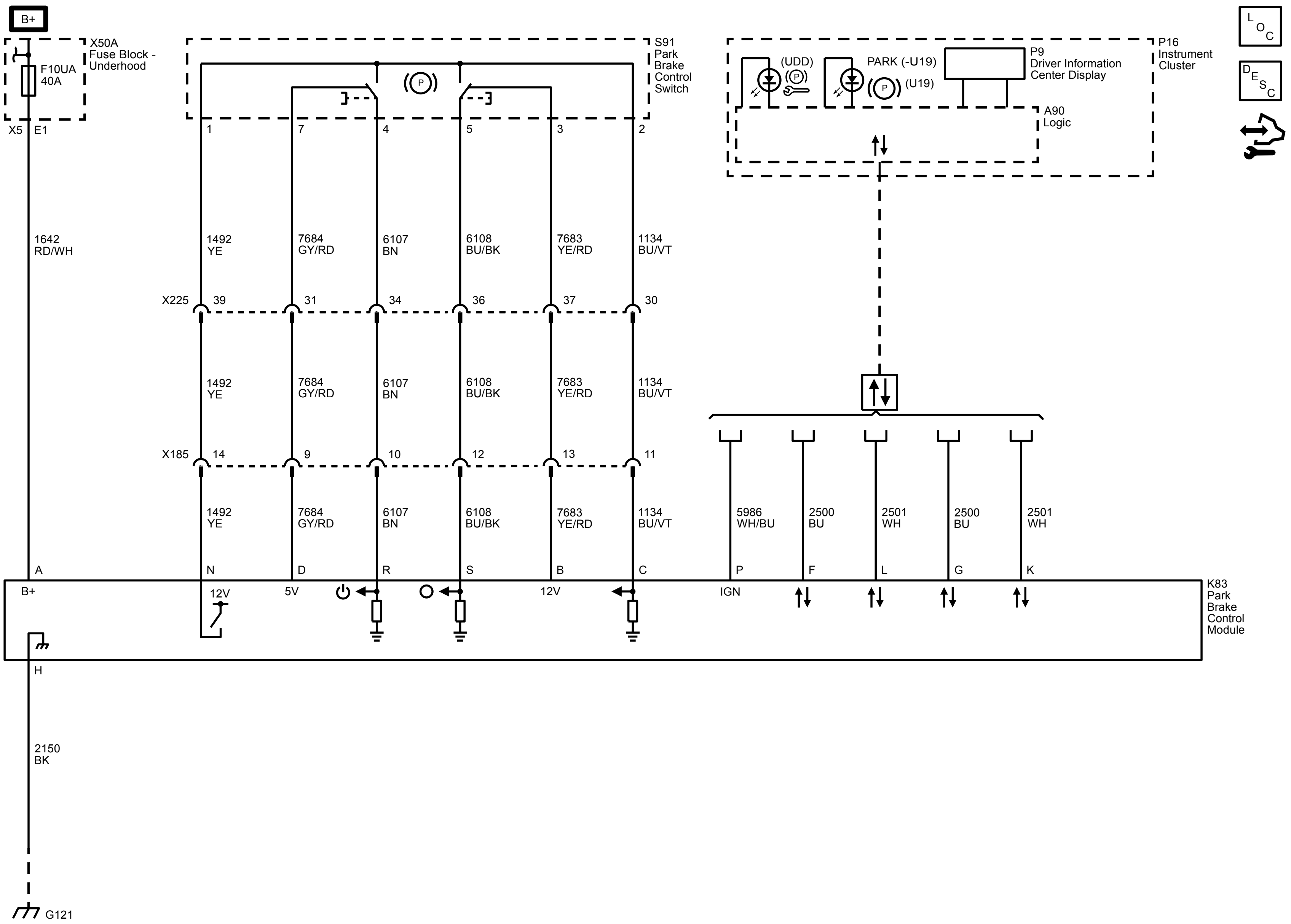
Brakes

Park Brake

Schematic and Routing Diagrams

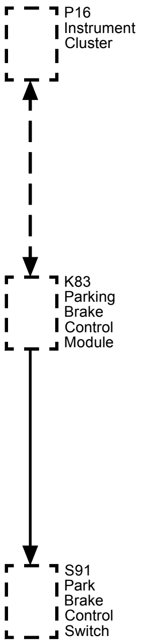
Park Brake System Schematics

Park Brake System Schematics


B+
X50A
Fuse Block - Underhood
F10UA
40A
X5
E1
S91
Park
Brake
Control
Switch
P
1
7
4
5
3
2
(UDD)
P
PARK (-U19)
P
(U19)
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
L O C
D E S C
1642
RD/WH
1492
YE
7684
GY/RD
6107
BN
6108
BU/BK
7683
YE/RD
1134
BU/VT
X225
39
31
34
36
37
30
1492
YE
7684
GY/RD
6107
BN
6108
BU/BK
7683
YE/RD
1134
BU/VT
X185
14
9
10
12
13
11
1492
YE
7684
GY/RD
6107
BN
6108
BU/BK
7683
YE/RD
1134
BU/VT
5986
WH/BU
2500
BU
2501
WH
2500
BU
2501
WH
A
N
D
R
S
B
C
P
F
L
G
K
B+
12V
5V
12V
IGN
K83
Park
Brake
Control
Module
H
2150
BK
G121

Description and Operation

Electronic Parking Brake Description



Vehicles with the electric parking brake have a switch in the center console, which takes the place of the manual parking brake system, the foot pedal and release handle. In case of insufficient electrical power, the electric parking brake cannot be applied or released.

Electric Parking Brake Control Module

The parking brake control module has an internal motor, apply actuator, release actuator, and temperature sensor. The parking brake control module also contains the logic for applying and releasing the parking brake when commanded by the park brake control switch. When the parking brake control module receives a signal from the switch the internal circuit board temperature is checked to verify it is within operating range before the control module performs the requested operation.

The electric parking brake module receives hard wired signals from the apply/release switch and communication enable. The electric parking brake module receives wheel speed sensor signals, engine torque, gear information, brake pedal signal, and etc. through GM-LAN.

Electric Parking Brake Apply

The electric parking brake can be applied any time the vehicle is stopped or in motion. The electric parking brake is applied by momentarily lifting up on the park brake control switch. The red park brake light will momentarily flash while the parking brake is being applied. Once fully applied, the red park brake light will turn on. If the electric parking brake is applied while the vehicle is in motion, a chime will sound, and the message "Release Park Brake Switch" will be displayed.

If the red park brake light is flashing, the electric parking brake is only partially applied or released, or there is a problem with the electric parking brake. The message "Service Park Brake" will be displayed.

Electric Parking Brake Release

To release the electric parking brake, turn the ignition switch to the ON or RUN position, apply and hold the brake pedal, and push down momentarily on the park brake control switch. When the electric parking brake is released the red park brake light turns off.

The electric parking brake can be used to prevent roll back for vehicles with a manual transmission taking off on a hill. In a situation where no roll back is desired, an applied electric parking brake will allow both feet to be used for the clutch and accelerator pedals in preparation for starting the vehicle moving in the intended direction. In this situation, perform the normal clutch and accelerator actions required to begin moving the vehicle. There is no need to push the switch to release the electric parking brake. To disable this feature lift and hold the park brake control switch while the vehicle is in motion, this will keep the electric parking brake applied.

Manual Parking Brake Cable Tension Release

If the park brake cable tension cannot be released under normal mode of operation, it can be released manually. The manual release capability will make it possible for the driver to transfer the vehicle into a movable state in the case of a failure of the electric parking brake system. The procedure can be found in the Repair Instructions, Parking Brake Cable Adjuster Disabling procedure.

Park Brake System Description and Operation

System Component Description

The park brake system consists of the following:

Electronic Parking Brake Control Module (With RPO J71): Electronically transfers park brake system apply input force to the park brake cable system. Refer to Electronic Parking Brake Description.

Park Brake Lever/Pedal Assembly (Without RPO J71): Receives and transfers park brake system apply input force from driver to park brake cable system.

Park Brake Cables: Transfers input force, through park brake cable equalizer, to park brake apply lever.

Park Brake Cable Equalizer: Evenly distributes input force to both the left and right park brake units.

Park Brake Apply Lever: Multiplies and transfers input force to park brake actuator.

Park Brake Actuator/Adjuster: Uses multiplied input force from apply lever to expand park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor.

Threaded park brake actuators are also used to control clearance between the park brake shoe and the friction surface of the drum-in-hat portion of the rear brake rotor.

Park Brake Shoe: Applies mechanical output force from park brake actuator to friction surface of the drum-in-hat portion of the rear brake rotor.

System Operation

Park brake apply input force is transferred and evenly distributed, through the park brake cables and the park brake cable equalizer, to the left and right park brake apply levers. The park brake apply levers multiply and transfer the apply input force to the park brake actuators which expand the park brake shoe toward the friction surface of the drum-in-hat portion of the rear brake rotor in order to prevent the rotation of the rear tire and wheel assemblies. The park brake lever/pedal assembly, if equipped, releases an applied park brake system when it is depressed again.

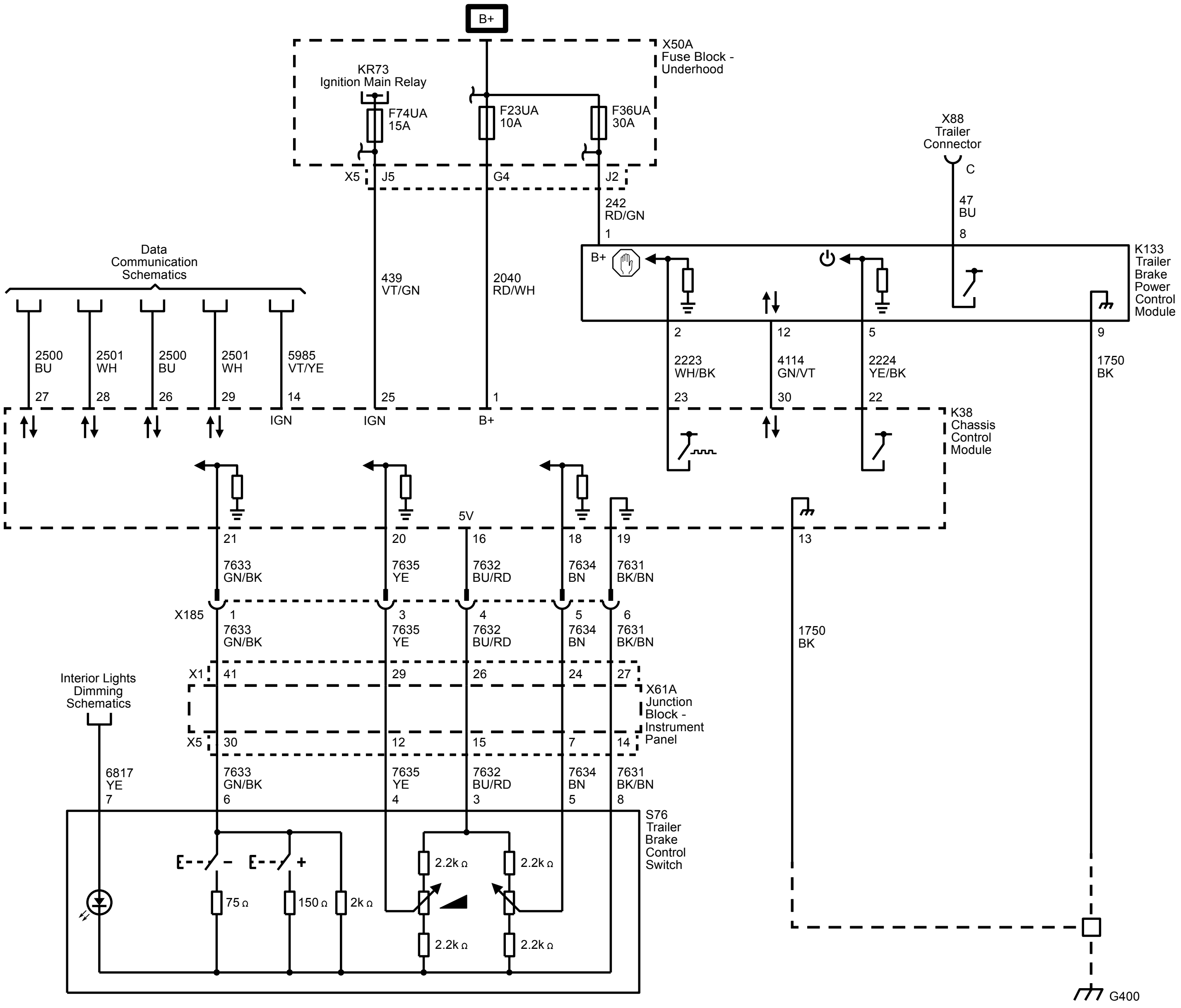
Brakes

Trailer Brake Controls

Schematic and Routing Diagrams

Trailer Brake Control Schematics

Trailer Brake


B+
X50A Fuse Block - Underhood
KR73 Ignition Main Relay
F74UA 15A
F23UA 10A
F36UA 30A
X5
J5
G4
J2
242 RD/GN
1
X88 Trailer Connector
C
47 BU
8
B+
K133 Trailer Brake Power Control Module
Data Communication Schematics
439 VT/GN
2040 RD/WH
2
12
5
9
2223 WH/BK
4114 GN/VT
2224 YE/BK
1750 BK
2500 BU
2501 WH
2500 BU
2501 WH
5985 VT/YE
27
28
26
29
14
25
1
23
30
22
IGN
IGN
B+
K38 Chassis Control Module
5V
21
20
16
18
19
13
7633 GN/BK
7635 YE
7632 BU/RD
7634 BN
7631 BK/BN
X185
1
3
4
5
6
7633 GN/BK
7635 YE
7632 BU/RD
7634 BN
7631 BK/BN
1750 BK
Interior Lights Dimming Schematics
X1
41
29
26
24
27
X61A Junction Block - Instrument Panel
X5
30
12
15
7
14
6817 YE
7
7633 GN/BK
6
7635 YE
4
7632 BU/RD
3
7634 BN
5
7631 BK/BN
8
S76 Trailer Brake Control Switch
–
+
75 Ω
150 Ω
2k Ω
2.2k Ω
2.2k Ω
2.2k Ω
2.2k Ω
G400

Description and Operation

Trailer Brake Controls Description and Operation

A trailer brake control system is used to control the amount of trailer braking power that is made available to trailers with brakes that require a controlled electrical output signal for actuation.

The power output to the trailer brakes is based on both the amount of braking being applied by the vehicle's brake system and on the type of trailer brakes detected.

The Trailer Brake Control System is compatible with two types of Trailer Brake Systems as listed below:

1. **Electric Brakes** A controlled electrical output signal energizes an electric-magnet/lever arm assembly that directly actuates the brake mechanism. The GDS name for this system is "Electromagnetic Brakes".
2. **Electric Over Hydraulic Brakes** A controlled electrical output signal energizes a remote, trailer mounted hydraulic pump to build brake pressure in a closed hydraulic system on the trailer. The hydraulic fluid pressure actuates the brake mechanism. The GDS name for this system is "Electrohydraulic Brakes".

Trailer Brake Output Versus Trailer Brake Type

- The trailer brake system characterizes the trailer brakes as either Electric Brake or Electric Over Hydraulic Brake automatically. This characterization may be affected by the number, type, and age of the trailer brake magnets, as well as any other devices installed on the trailer brakes (i.e. adapters for Electric Over Hydraulic brake functionality).
- The trailer brake system is fully operational with either characterization.
- Some features of the trailer brake system may be different based on the trailer brake type characterization. An example of this is at zero speed, where pressing the service brake pedal will produce output when the trailer brakes are characterized as Electric Brakes, but not when characterized as Electric Over Hydraulic Brakes.
- Sliding the manual trailer brake apply lever will produce output at zero speed for either characterization.

The user gain allows the driver to adjust the amount of trailer brake output to match the trailer load and road surface. The controller determines the desired trailer brake output and provides a control signal to the K133 Trailer Brake Power Control Module. The K133 Trailer Brake Power Control Module amplifies the signal and provides the output required to activate the Electric or Electric Over Hydraulic trailer brakes.

The trailer brake control can support up to a maximum of four axles with electric trailer brakes (8 brake magnets).

Connecting a trailer that is not compatible with the trailer brake system may result in reduced or complete loss of trailer braking. There may be an increase in stopping distance or trailer instability which could result in personal injury or damage to the vehicle, trailer or other property. An aftermarket controller may be available for use with trailers with surge or air trailer brake systems.

To determine the type of brakes on your trailer and the availability of controllers, check with your trailer manufacturer or dealer. Do not power up an aftermarket controller with the factory brake controller at the same time.

The vehicle is equipped with the following trailer braking components:

- K38 Chassis Control Module
- K133 Trailer Brake Power Control Module
- S76 Trailer Brake Control Panel
- Manual Trailer Brake Apply
- Trailer Gain Adjustment
- Trailer Brake Driver Information Center Display

Chassis Control Module

The K38 Chassis Control Module (CCM) is a serviceable GMLAN module. The chassis control module sends the low power commanded duty cycle signal to the trailer brake power control module. The trailer brake power control module amplifies the signal and provides an output that is required to drive the trailer brakes.

Trailer Brake Power Control Module

The K133 Trailer Brake Power Control Module (TBPM) is a solid state power switching module that supplies power to the trailer brakes at the input command duty cycle. Diagnostic messages are sent from the TBPM to the CCM on a dedicated LIN bus.

Trailer Brake Control Panel

The S76 Trailer Brake Control Panel contains the trailer gain and manual apply switches. It is located on the instrument panel to the left of the steering column. Refer to the instrument panel overview for more information on the location. The control panel and switches allows you to adjust the amount of output, referred to as trailer gain, available to the Electric or Electric Over Hydraulic brakes. It also allows you to manually apply the trailer brakes. The trailer brake control panel and switches are used along with the trailer brake display page on the driver information center to adjust and display power output to the trailer brakes.

Manual Trailer Brake Apply

The manual trailer brake apply lever is located on the S76 Trailer Brake Control Panel and is used to apply the trailer's Electric or Electric Over Hydraulic brakes independent of the vehicle's brakes. This lever is used in the trailer gain adjustment procedure to properly adjust the power output to the trailer brakes.

Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the trailer brake display page in the Driver Information Center (DIC). If the vehicle's service brakes are applied while using the manual trailer brake apply lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either the vehicle's braking or manual trailer brakes are applied.

Trailer Gain Adjustment

Trailer gain should be set for a specific trailering condition and must be adjusted any time vehicle loading, trailer loading or road surface conditions change. It is important to re-adjust trailer gain any time the tow vehicle, trailer loading or road surface conditions change or it you notice trailer wheel lock-up at any time while you are towing.

Setting the trailer gain properly is needed for the best trailer stopping performance. A trailer that is over-gained may result in locked trailer brakes. A trailer that is under-gained may result in not enough trailer braking. Both of these conditions may result in poor stopping and stability of the vehicle and trailer.

Trailer Gain Adjustment Procedure

- Adjust trailer gain in 0.5 step increments up to 10 gain setting by using the gain adjustment +/− buttons on the trailer brake control panel switch. Pressing and holding a gain button will cause the trailer gain to continuously increment or decrement. To turn the output to the trailer off, set the gain to zero.
- Drive the tow vehicle and trailer combination on a level surface representative of the towing condition and free of traffic at approximately 32–40 km/h (20–25 mph) and fully apply the manual trailer brake apply lever mechanism located on the trailer brake control panel switch. Adjusting the trailer gain at slower speeds may result in an incorrect gain setting.
- Adjust the trailer gain to just below the threshold of trailer wheel lock-up . Trailer wheel lock-up may not occur if towing a heavily loaded trailer. In this case, adjust the trailer gain to the highest allowable setting for the towing condition.

Hill Start Assist

The hill start assist allows the driver to launch the vehicle without a roll back when the driver is moving their foot from the brake pedal to the accelerator pedal. Refer to the hill start assist system in the anti-lock brake system description and operation document for more information.

Trailer Sway Control

The trailer sway control can detect the vehicle yaw instability, caused by an attached trailer. Refer to the trailer sway control system in the anti-lock brake system description and operation document for more information.

Driver Information Center Indicators and Messages

The following indicators are used to inform the driver of several different conditions:

Trailer Connected

This message will be briefly displayed when a trailer with Electric or Electric Over Hydraulic brakes is first connected to the vehicle. This message will automatically turn off in about ten seconds. The driver can also acknowledge this message before it automatically turns off.

Check Trailer Wiring

This message will be displayed if:

- The system detects that a trailer with Electric or Electric Over Hydraulic brakes is connected to the vehicle and then the trailer harness becomes disconnected from the vehicle.
- The trailer connection is recognized initially and then a disconnect occurs while the vehicle is stationary. This message will automatically turn off in about thirty seconds. This message will also turn off if the driver acknowledges this message off or if the trailer harness is reconnected.
- A disconnect of the trailer wiring harness occurs while the vehicle is moving. The Check Trailer Wiring message will continue until the ignition is turned off. The message will also turn off if the driver acknowledges this message off or it the trailer harness is re-connected or repairs are completed.
- There is an electrical fault in the wiring to the electric trailer brakes. The Check Trailer Wiring message will continue as long as there is an electrical fault in the trailer wiring. This message will also turn off if the driver acknowledges this message off.
- A poor connection at the 7–way connector may cause the Check Trailer Wiring message. Some aftermarket 7–way trailer side connector adapters or plugs may cause deformation or excessive wear to the vehicle’s trailer terminals. It is recommended that you use an OEM or Pollak heavy duty 7–way trailer side connector adapter.

Service Trailer Brake System

This message will be displayed when there is a problem with the trailer brake control system. The trailer brake system may not be fully functional, or may not be functioning at all. The trailer brake system is designed to provide trailer braking, if possible, even when faults prevent it from being fully functional. This reduced functionality includes:

1. Providing trailer braking when the master cylinder pressure or brake pedal switch are faulted.
2. Providing trailer braking when hill start assist and trailer sway control communication is faulted.
3. Providing trailer braking when certain manual trailer brake apply lever faults are present.

These conditions should be repaired to allow the trailer brake system to be fully functional.

Trailer Gain and Output Display

This display menu can be accessed by scrolling through the DIC menu, or any time the trailer gain +/− button is depressed, or the manual trailer brake apply lever is actuated. The trailer output is displayed from 0 to full output and indicates the output power provided to the trailer brakes, relative to the gain setting.

After the electrical connection is made to a trailer equipped with electric brakes or electric over hydraulic brakes, the TRAILER CONNECTED message will be displayed momentarily on the DIC. The Trailer Brake Display Page can be selected on the DIC showing TRAILER GAIN and OUTPUT, after all vehicle related service messages are acknowledged by the driver. Depending on which instrument panel cluster is in the vehicle, the DIC may display dashed lines, a greyed out display, or it may be blank signifying a disconnected trailer or a trailer brake fault condition.

Driver Information and Entertainment

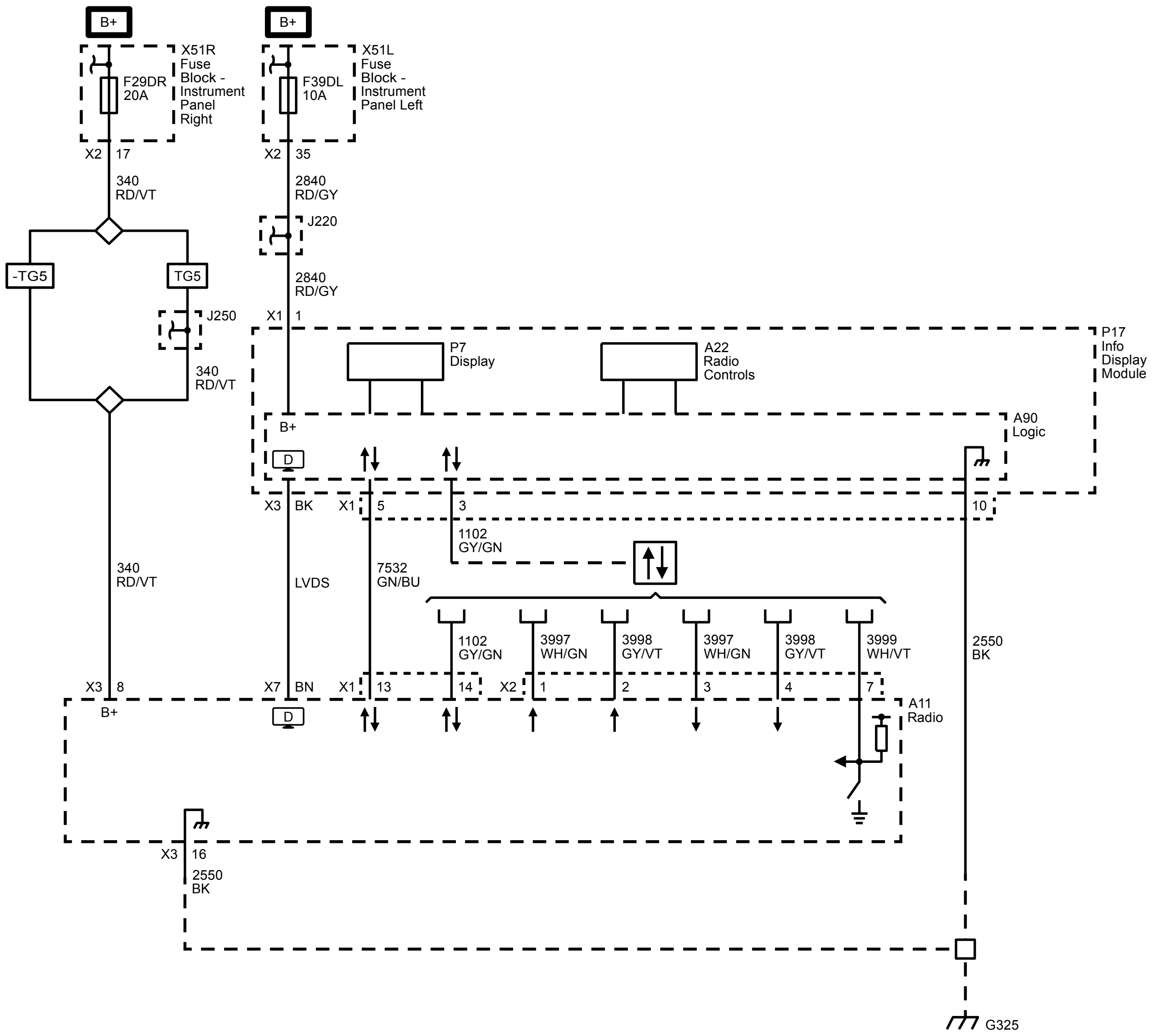
Cellular, Entertainment, and Navigation

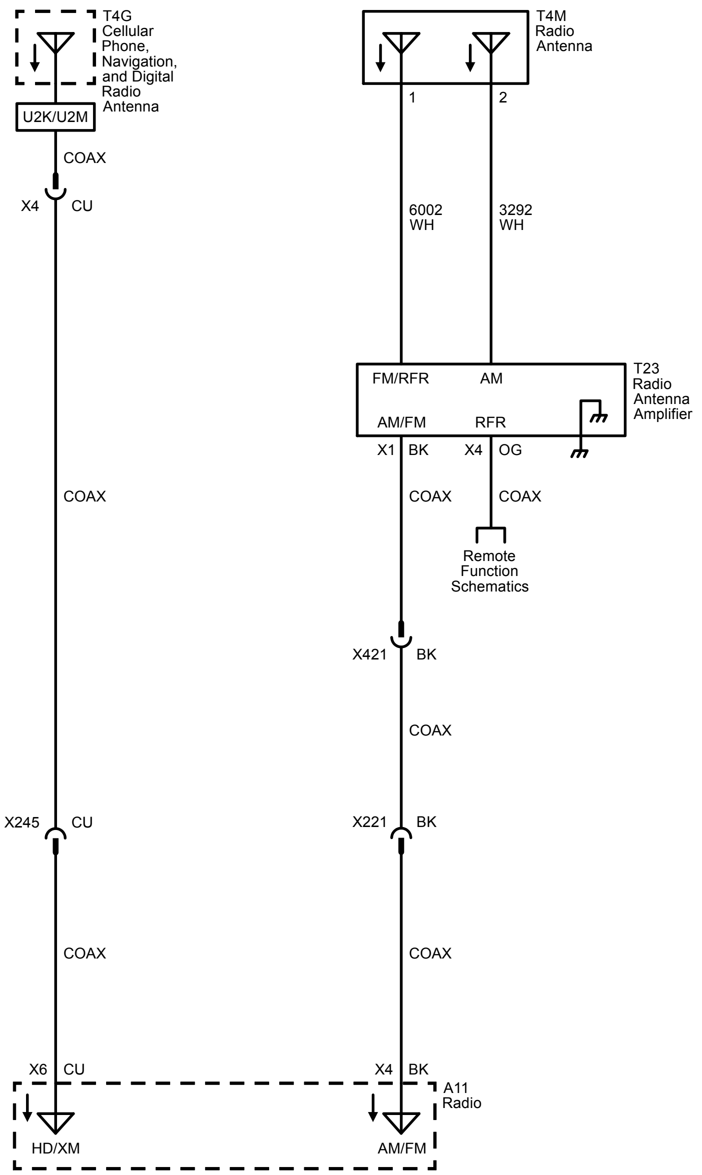
Schematic and Routing Diagrams

Radio/Navigation System Schematics (IO3)

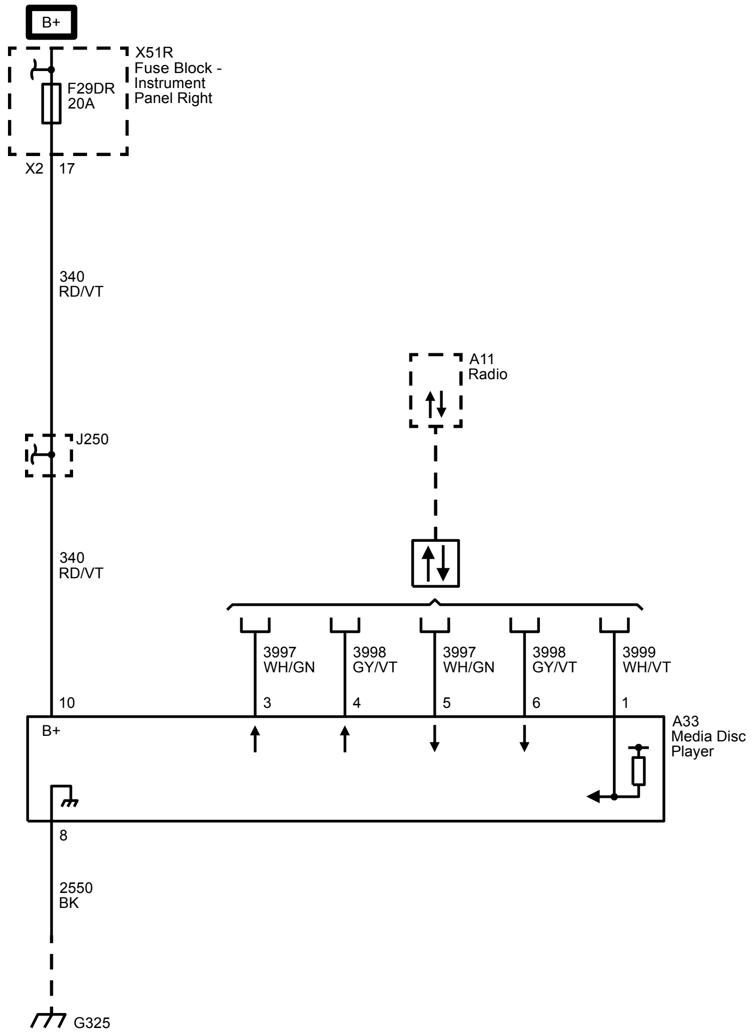
Radio Power, Ground and Serial Data

LOC
DESC

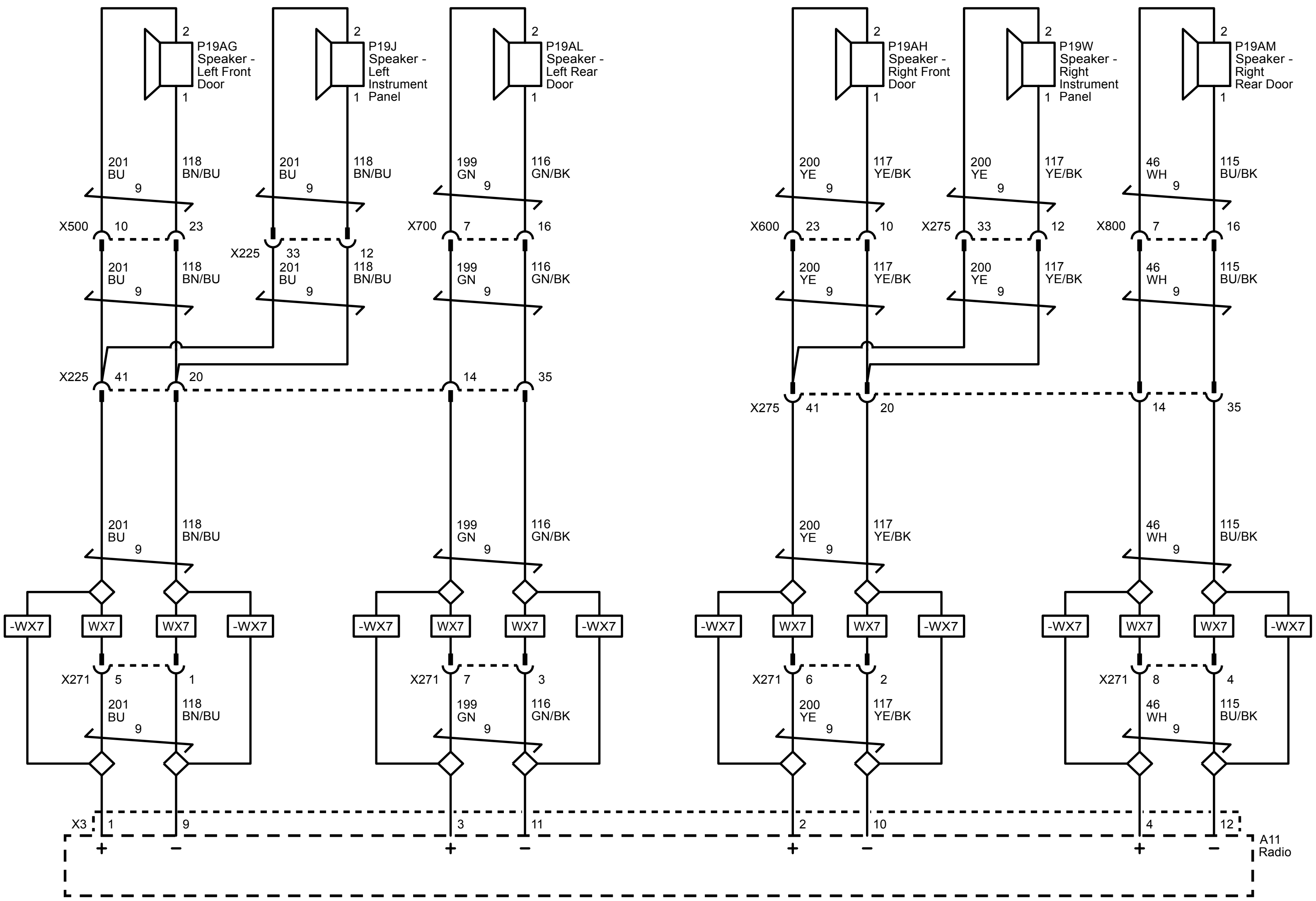

B+
X51R Fuse Block - Instrument Panel Right
F29DR 20A
X2 17
340 RD/VT
-TG5
TG5
J250
340 RD/VT
B+
X51L Fuse Block - Instrument Panel Left
F39DL 10A
X2 35
2840 RD/GY
J220
2840 RD/GY
X1 1
P17 Info Display Module
P7 Display
A22 Radio Controls
A90 Logic
B+
D
X3 BK
X1 5
3
10
1102 GY/GN
7532 GN/BU
LVDS
340 RD/VT
1102 GY/GN
3997 WH/GN
3998 GY/VT
3997 WH/GN
3998 GY/VT
3999 WH/VT
2550 BK
X3 8
X7 BN
X1 13
14
X2 1
2
3
4
7
B+
D
A11 Radio
X3 16
2550 BK
G325


T4G
Cellular Phone, Navigation, and Digital Radio Antenna
U2K/U2M
COAX
X4
CU
COAX
X245
CU
COAX
X6
CU
HD/XM
T4M
Radio Antenna
1
2
6002
WH
3292
WH
FM/RFR
AM
AM/FM
RFR
T23
Radio Antenna Amplifier
X1
BK
X4
OG
COAX
COAX
Remote Function Schematics
X421
BK
COAX
X221
BK
COAX
X4
BK
A11
Radio
AM/FM

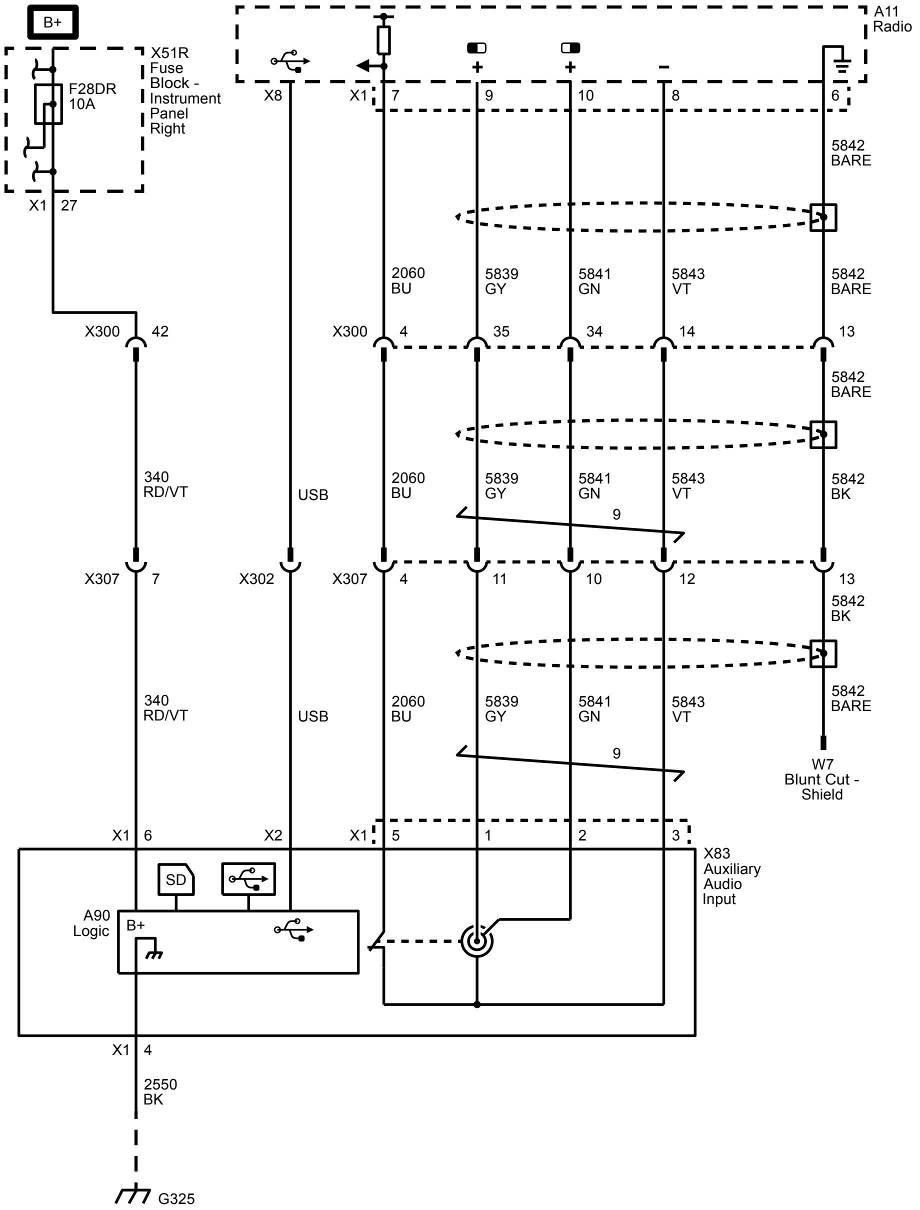
Media Disc Player Power, Ground and Serial Data


B+
X51R
Fuse Block - Instrument Panel Right
F29DR
20A
X2
17
340
RD/VT
J250
340
RD/VT
A11
Radio
3997
WH/GN
3998
GY/VT
3997
WH/GN
3998
GY/VT
3999
WH/VT
10
3
4
5
6
1
B+
A33
Media Disc Player
8
2550
BK
G325

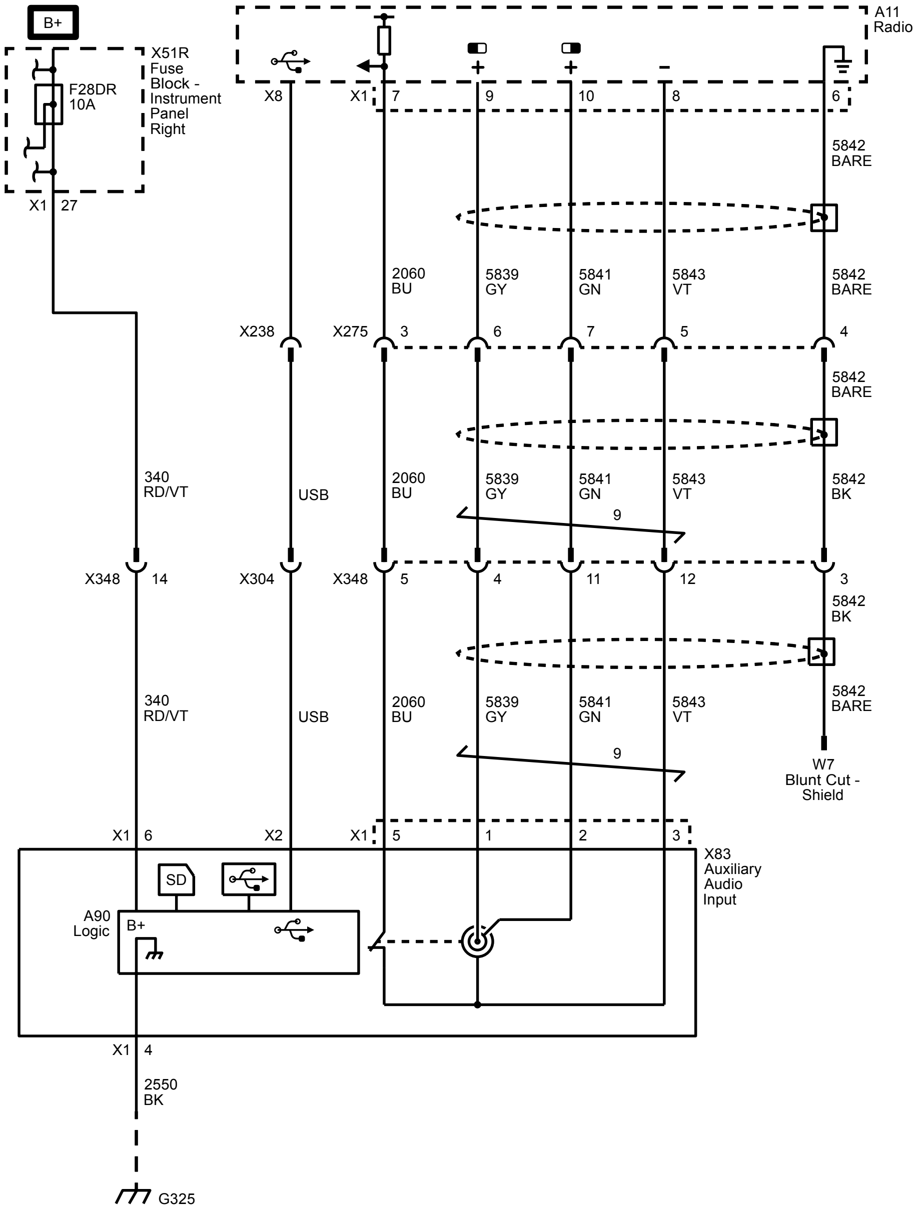
Speakers (UQ3)


P19AG Speaker - Left Front Door
P19J Speaker - Left Instrument Panel
P19AL Speaker - Left Rear Door
P19AH Speaker - Right Front Door
P19W Speaker - Right Instrument Panel
P19AM Speaker - Right Rear Door
2
1
201 BU 9
118 BN/BU
199 GN 9
116 GN/BK
200 YE 9
117 YE/BK
46 WH 9
115 BU/BK
X500 10 23
X225 33 12
X700 7 16
X600 23 10
X275 33 12
X800 7 16
X225 41 20 14 35
X275 41 20 14 35
-WX7
WX7
X271 5 1
X271 7 3
X271 6 2
X271 8 4
X3 1 9 3 11 2 10 4 12
+
−
A11 Radio

Auxiliary Inputs (D07/DCK)

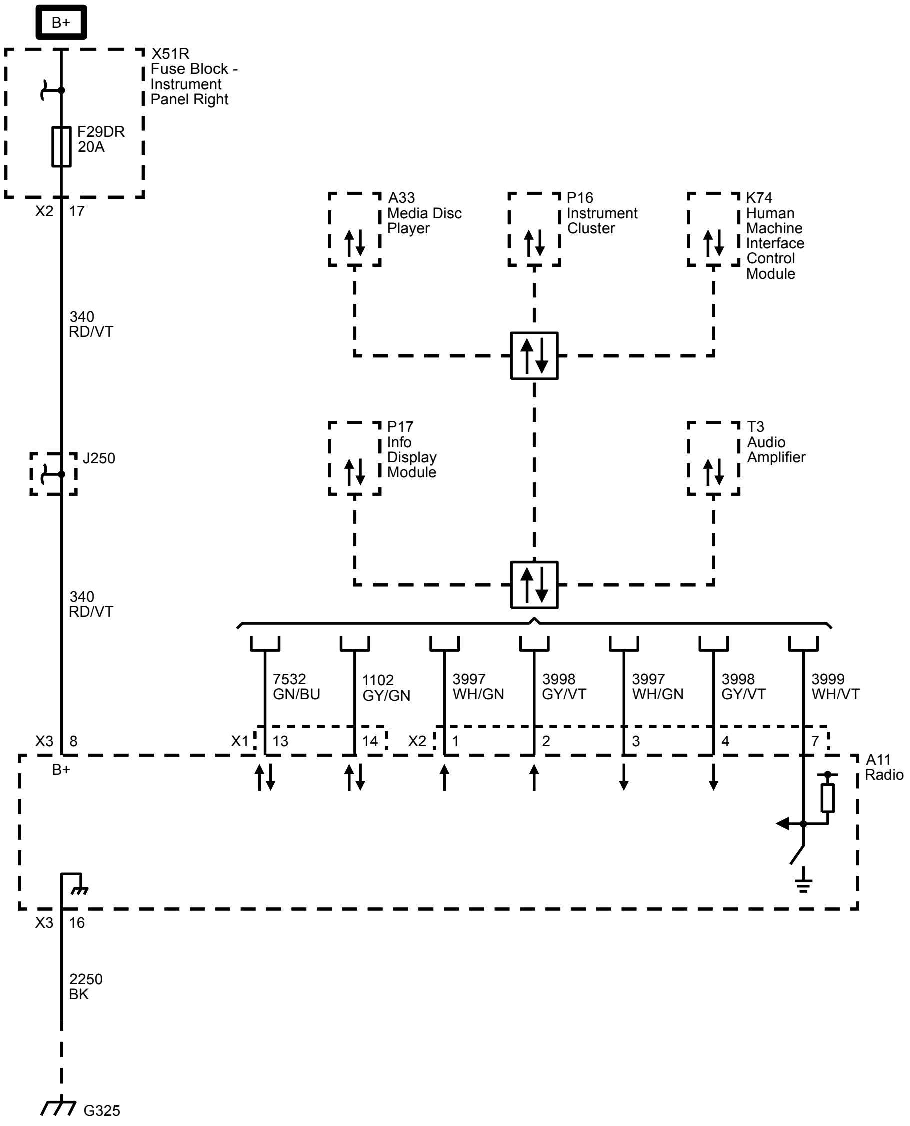

B+
X51R
Fuse
Block -
Instrument
Panel
Right
F28DR
10A
X1 27
A11
Radio
X8
X1 7
9
10
8
6
+
+
-
5842
BARE
2060
BU
5839
GY
5841
GN
5843
VT
5842
BARE
X300 42
X300 4
35
34
14
13
5842
BARE
340
RD/VT
USB
2060
BU
5839
GY
5841
GN
5843
VT
9
5842
BK
X307 7
X302
X307 4
11
10
12
13
5842
BK
5842
BARE
340
RD/VT
USB
2060
BU
5839
GY
5841
GN
5843
VT
9
W7
Blunt Cut -
Shield
X1 6
X2
X1 5
1
2
3
X83
Auxiliary
Audio
Input
SD
A90
Logic
B+
X1 4
2550
BK
G325

Auxiliary Inputs (AZ3)


B+
X51R
Fuse
Block -
Instrument
Panel
Right
F28DR
10A
X1 27
A11
Radio
X8
X1 7
9
10
8
6
5842
BARE
2060
BU
5839
GY
5841
GN
5843
VT
5842
BARE
X238
X275 3
6
7
5
4
5842
BARE
340
RD/VT
USB
2060
BU
5839
GY
5841
GN
5843
VT
9
5842
BK
X348 14
X304
X348 5
4
11
12
3
5842
BK
340
RD/VT
USB
2060
BU
5839
GY
5841
GN
5843
VT
9
5842
BARE
W7
Blunt Cut -
Shield
X1 6
X2
X1 5
1
2
3
X83
Auxiliary
Audio
Input
SD
A90
Logic
B+
X1 4
2550
BK
G325

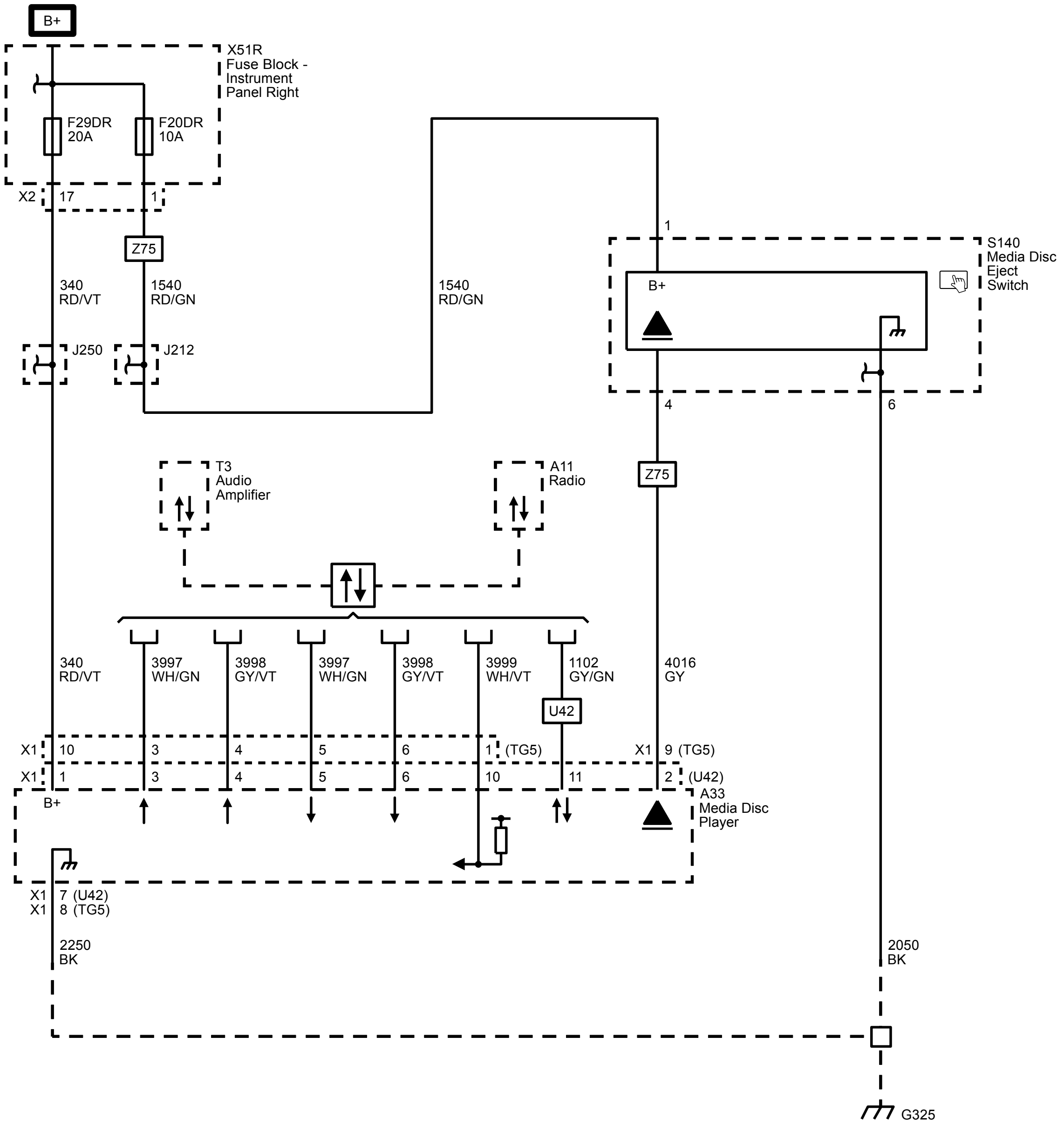
Radio/Navigation System Schematics (IO5, IO6)

Radio Power, Ground and Serial Data

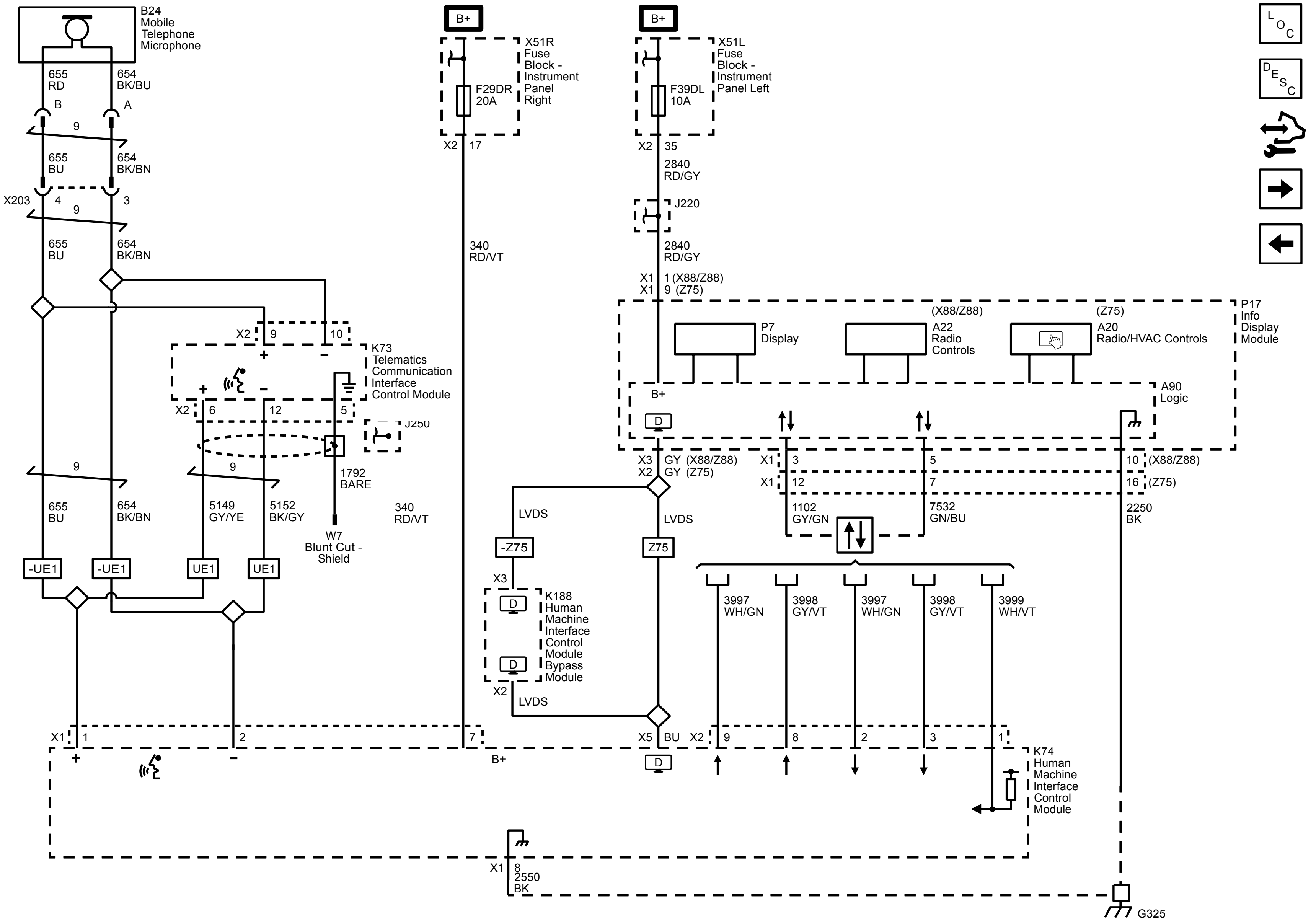


B+
X51R
Fuse Block - Instrument Panel Right
F29DR
20A
X2
17
340
RD/VT
J250
340
RD/VT
A33
Media Disc Player
P16
Instrument Cluster
K74
Human Machine Interface Control Module
P17
Info Display Module
T3
Audio Amplifier
7532
GN/BU
1102
GY/GN
3997
WH/GN
3998
GY/VT
3997
WH/GN
3998
GY/VT
3999
WH/VT
X3
8
B+
X1
13
14
X2
1
2
3
4
7
A11
Radio
X3
16
2250
BK
G325

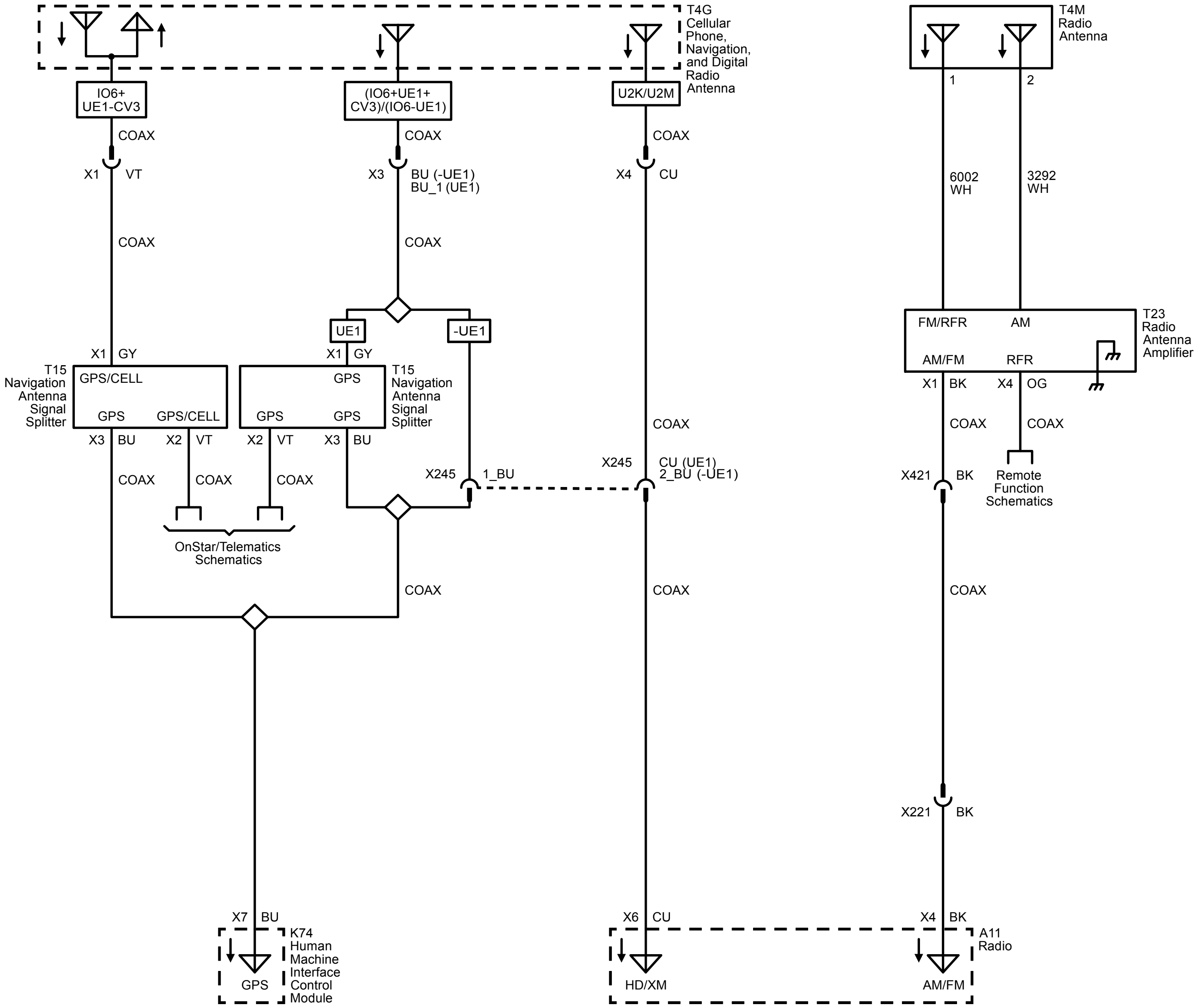
Media Disc Player Power, Ground and Serial Data

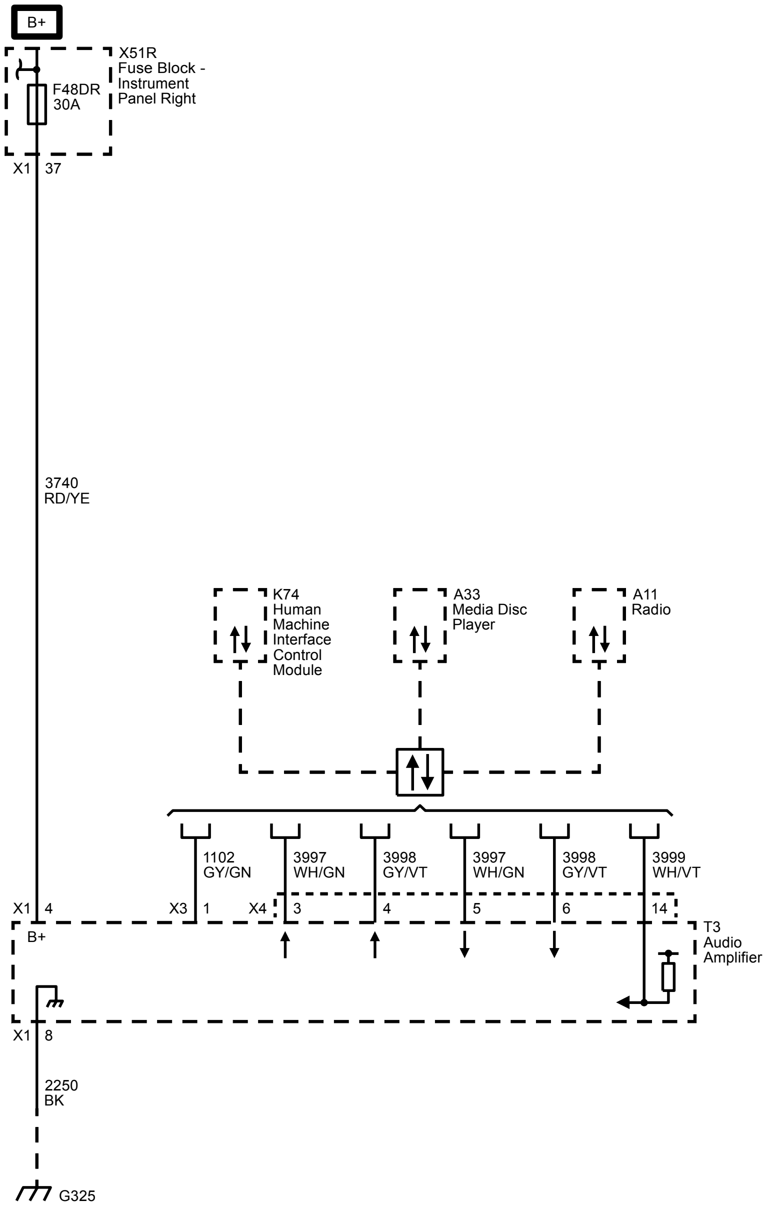


B+
X51R
Fuse Block -
Instrument
Panel Right
F29DR
20A
F20DR
10A
X2
17
1
Z75
340
RD/VT
1540
RD/GN
1540
RD/GN
J250
J212
1
S140
Media Disc
Eject
Switch
B+
4
6
Z75
T3
Audio
Amplifier
A11
Radio
340
RD/VT
3997
WH/GN
3998
GY/VT
3997
WH/GN
3998
GY/VT
3999
WH/VT
1102
GY/GN
4016
GY
U42
X1
10
3
4
5
6
1
(TG5)
X1
9 (TG5)
X1
1
3
4
5
6
10
11
2
(U42)
B+
A33
Media Disc
Player
X1
7 (U42)
X1
8 (TG5)
2250
BK
2050
BK
G325

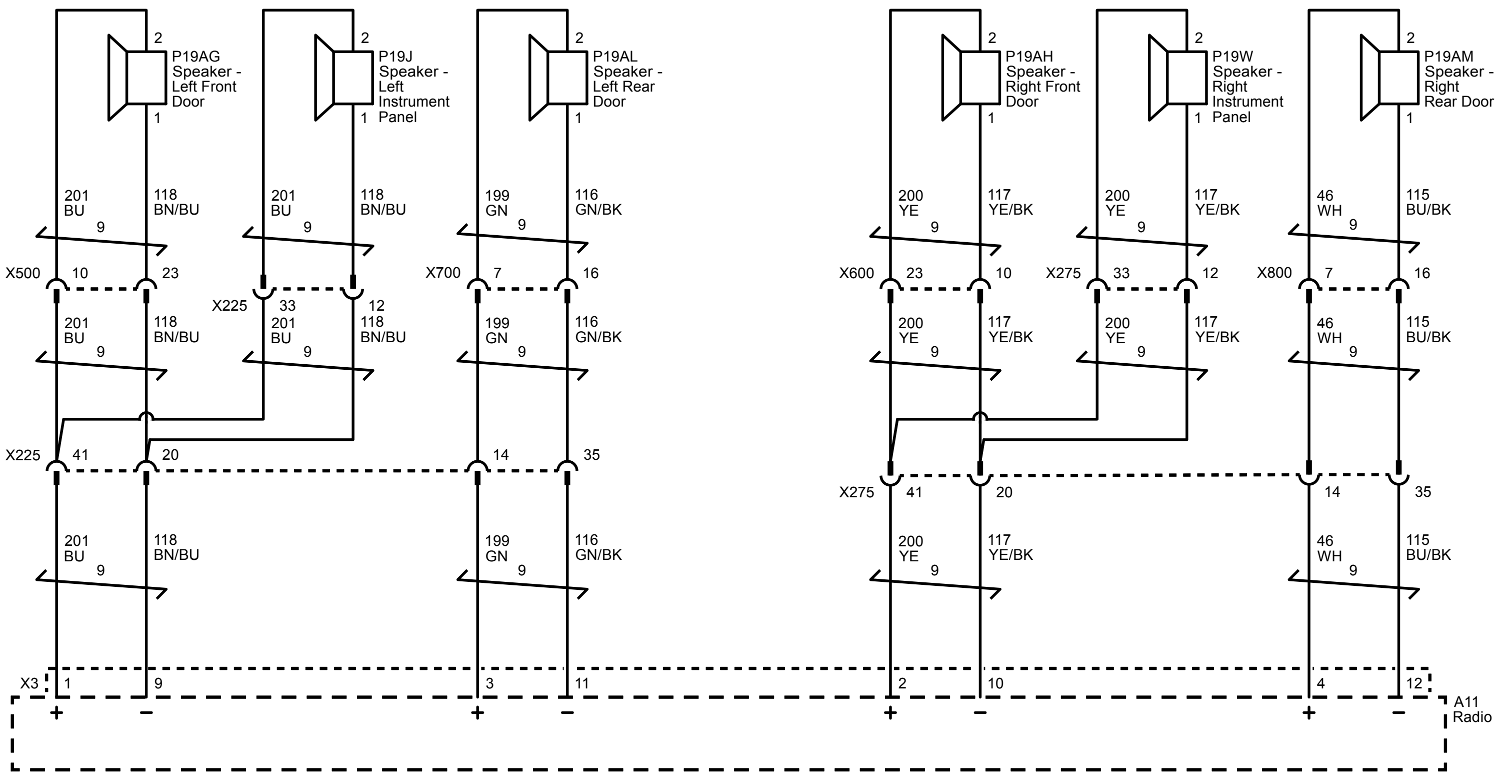

B24
Mobile
Telephone
Microphone
655 RD
654 BK/BU
B
A
9
655 BU
654 BK/BN
X203
4
3
655 BU
654 BK/BN
X2
9
10
K73
Telematics
Communication
Interface
Control Module
X2
6
12
5
J250
1792
BARE
5149 GY/YE
5152 BK/GY
W7
Blunt Cut -
Shield
-UE1
UE1
B+
X51R
Fuse
Block -
Instrument
Panel
Right
F29DR
20A
X2 17
340 RD/VT
X51L
Fuse
Block -
Instrument
Panel Left
F39DL
10A
X2 35
2840 RD/GY
J220
X1 1 (X88/Z88)
X1 9 (Z75)
P17
Info
Display
Module
P7
Display
(X88/Z88)
A22
Radio
Controls
(Z75)
A20
Radio/HVAC Controls
A90
Logic
D
X3 GY (X88/Z88)
X2 GY (Z75)
X1 3
X1 12
5
7
10 (X88/Z88)
16 (Z75)
1102 GY/GN
7532 GN/BU
2250 BK
LVDS
-Z75
Z75
X3
K188
Human
Machine
Interface
Control
Module
Bypass
Module
X2
3997 WH/GN
3998 GY/VT
3999 WH/VT
X1 1
2
7
B+
X5 BU
X2 9
8
2
3
1
K74
Human
Machine
Interface
Control
Module
X1 8
2550 BK
G325

Antennas

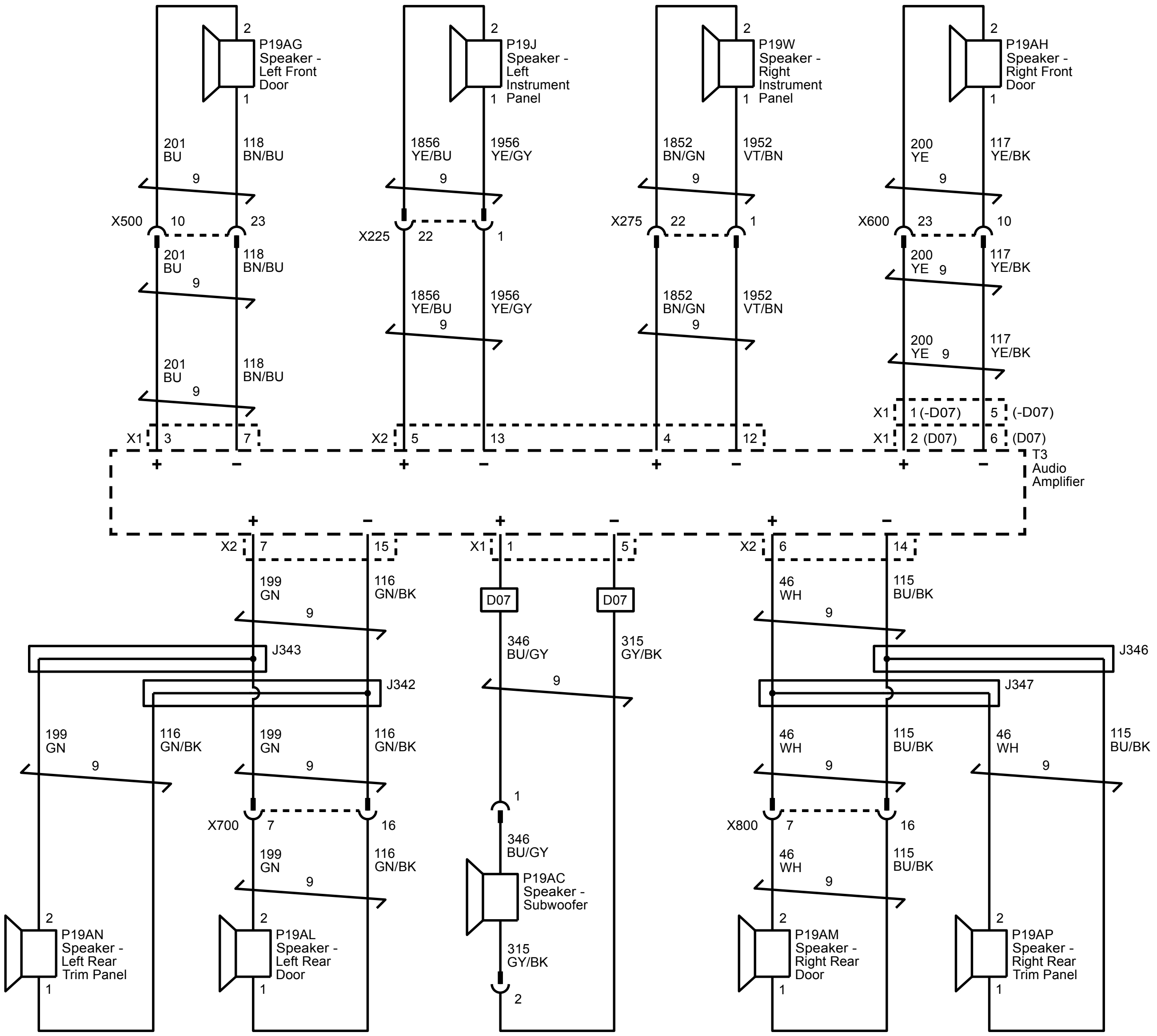

T4G
Cellular
Phone,
Navigation,
and Digital
Radio
Antenna
IO6+
UE1-CV3
(IO6+UE1+
CV3)/(IO6-UE1)
U2K/U2M
COAX
X1
VT
COAX
X3
BU (-UE1)
BU_1 (UE1)
COAX
X4
CU
COAX
COAX
UE1
-UE1
X1
GY
X1
GY
T15
Navigation
Antenna
Signal
Splitter
GPS/CELL
GPS
GPS/CELL
X3
BU
X2
VT
GPS
GPS
GPS
X2
VT
X3
BU
T15
Navigation
Antenna
Signal
Splitter
COAX
COAX
COAX
X245
1_BU
X245
CU (UE1)
2_BU (-UE1)
COAX
OnStar/Telematics
Schematics
COAX
COAX
X7
BU
K74
Human
Machine
Interface
Control
Module
GPS
X6
CU
X4
BK
A11
Radio
HD/XM
AM/FM
T4M
Radio
Antenna
1
2
6002
WH
3292
WH
FM/RFR
AM
AM/FM
RFR
T23
Radio
Antenna
Amplifier
X1
BK
X4
OG
COAX
COAX
X421
BK
Remote
Function
Schematics
COAX
X221
BK


B+
X51R
Fuse Block - Instrument Panel Right
F48DR
30A
X1 37
3740
RD/YE
K74
Human Machine Interface Control Module
A33
Media Disc Player
A11
Radio
1102
GY/GN
3997
WH/GN
3998
GY/VT
3997
WH/GN
3998
GY/VT
3999
WH/VT
X1 4
X3 1
X4 3
4
5
6
14
T3
Audio Amplifier
B+
X1 8
2250
BK
G325

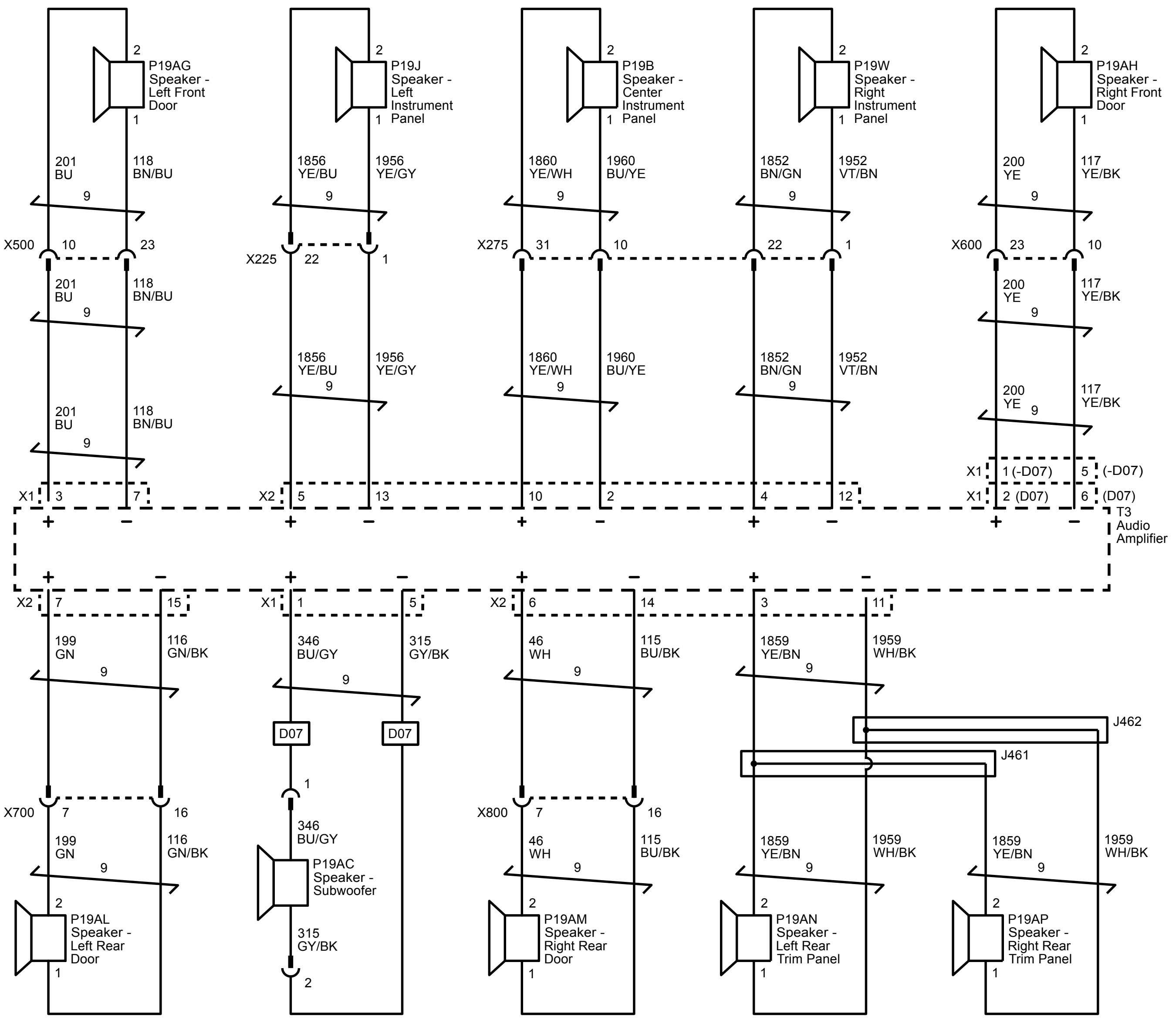
Speakers (UQ3)


P19AG
Speaker - Left Front Door
P19J
Speaker - Left Instrument Panel
P19AL
Speaker - Left Rear Door
P19AH
Speaker - Right Front Door
P19W
Speaker - Right Instrument Panel
P19AM
Speaker - Right Rear Door
2
1
201 BU
118 BN/BU
199 GN
116 GN/BK
200 YE
117 YE/BK
46 WH
115 BU/BK
9
X500
10
23
X225
33
12
X700
7
16
X600
23
10
X275
33
12
X800
7
16
X225
41
20
14
35
X275
41
20
14
35
X3
1
9
3
11
2
10
4
12
+
−
A11
Radio

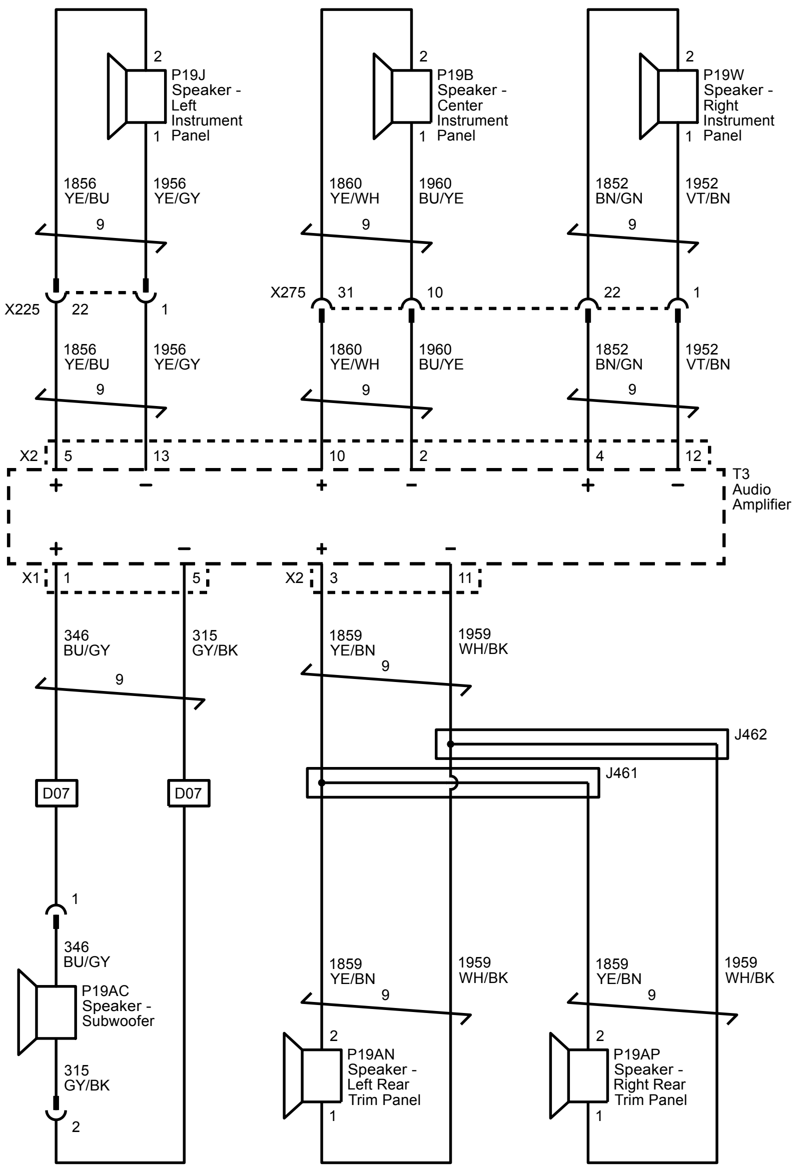
Speakers (UQA)


P19AG Speaker - Left Front Door
P19J Speaker - Left Instrument Panel
P19W Speaker - Right Instrument Panel
P19AH Speaker - Right Front Door
201 BU
118 BN/BU
1856 YE/BU
1956 YE/GY
1852 BN/GN
1952 VT/BN
200 YE
117 YE/BK
9
X500 10 23
X225 22 1
X275 22 1
X600 23 10
X1 1 (-D07) 5 (-D07)
X1 2 (D07) 6 (D07)
X1 3 7
X2 5 13
4 12
T3 Audio Amplifier
+
–
X2 7 15
X1 1 5
X2 6 14
D07
199 GN
116 GN/BK
346 BU/GY
315 GY/BK
46 WH
115 BU/BK
J343
J342
J346
J347
X700 7 16
X800 7 16
P19AN Speaker - Left Rear Trim Panel
P19AL Speaker - Left Rear Door
P19AC Speaker - Subwoofer
P19AM Speaker - Right Rear Door
P19AP Speaker - Right Rear Trim Panel
1
2

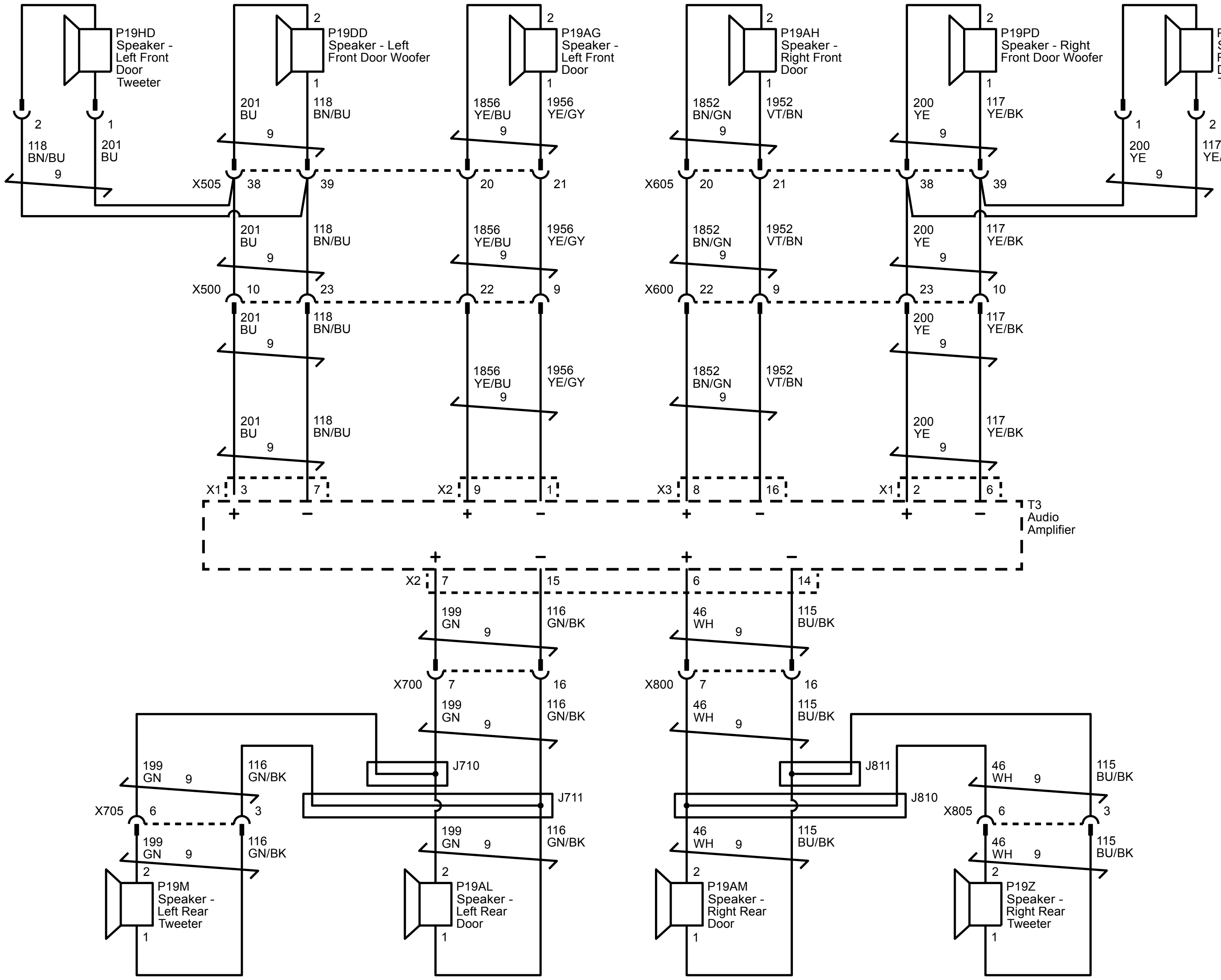
Speakers (UQS)


P19AG Speaker - Left Front Door
P19J Speaker - Left Instrument Panel
P19B Speaker - Center Instrument Panel
P19W Speaker - Right Instrument Panel
P19AH Speaker - Right Front Door
201 BU
118 BN/BU
1856 YE/BU
1956 YE/GY
1860 YE/WH
1960 BU/YE
1852 BN/GN
1952 VT/BN
200 YE
117 YE/BK
X500 10 23
X225 22 1
X275 31 10 22 1
X600 23 10
X1 3 7
X2 5 13 10 2 4 12
X1 1 (-D07) 5 (-D07)
X1 2 (D07) 6 (D07)
T3 Audio Amplifier
X2 7 15
X1 1 5
X2 6 14 3 11
199 GN
116 GN/BK
346 BU/GY
315 GY/BK
46 WH
115 BU/BK
1859 YE/BN
1959 WH/BK
D07
D07
J462
J461
X700 7 16
X800 7 16
P19AL Speaker - Left Rear Door
P19AC Speaker - Subwoofer
P19AM Speaker - Right Rear Door
P19AN Speaker - Left Rear Trim Panel
P19AP Speaker - Right Rear Trim Panel
9

Speakers - Instrument Panel, Rear Trim Panels and Sub Woofer (UQH)

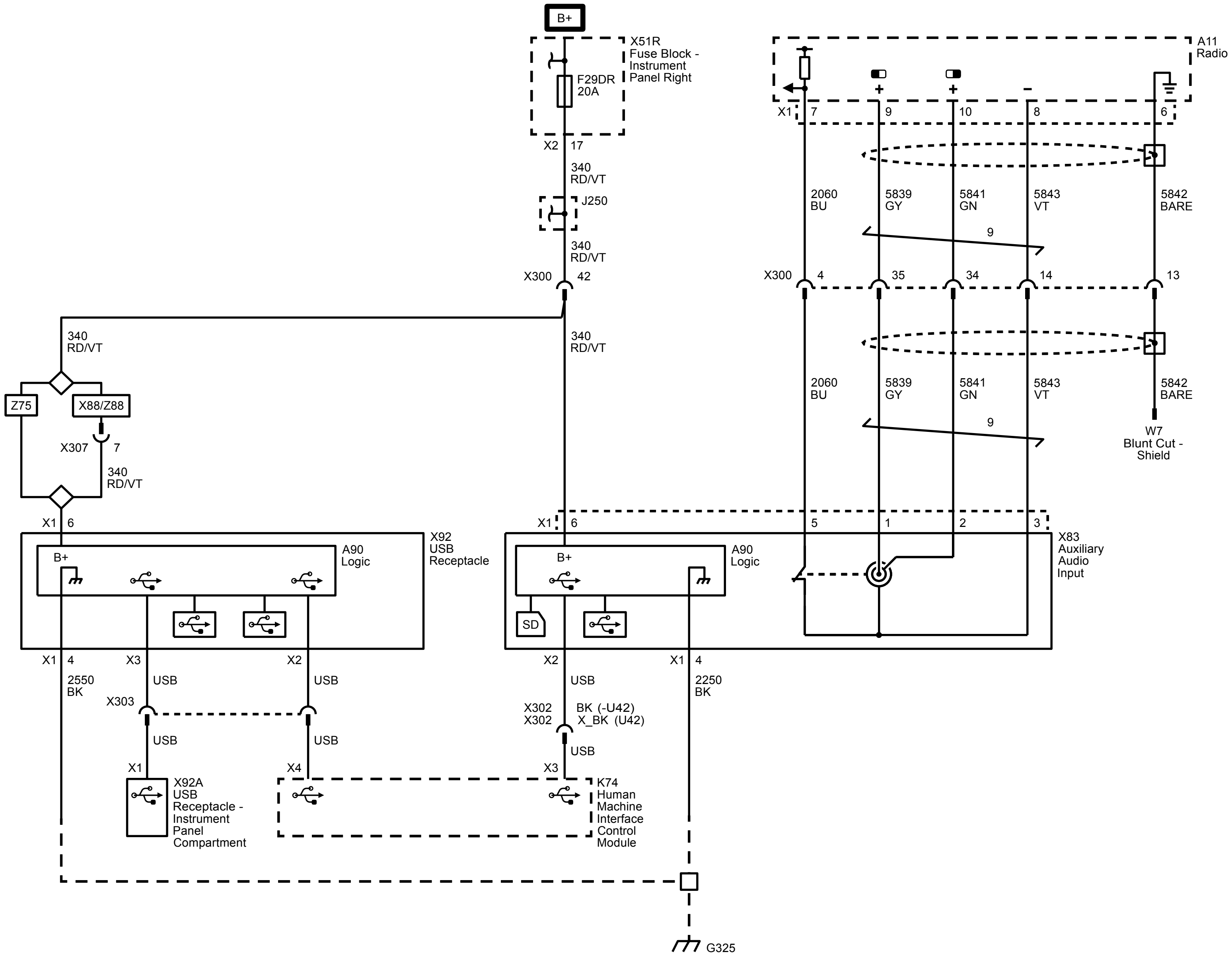

P19J Speaker - Left Instrument Panel
P19B Speaker - Center Instrument Panel
P19W Speaker - Right Instrument Panel
2
1
1856 YE/BU
1956 YE/GY
1860 YE/WH
1960 BU/YE
1852 BN/GN
1952 VT/BN
9
X225
22
1
X275
31
10
22
1
X2
5
13
10
2
4
12
+
−
T3 Audio Amplifier
X1
1
5
3
11
346 BU/GY
315 GY/BK
1859 YE/BN
1959 WH/BK
J462
J461
D07
D07
P19AC Speaker - Subwoofer
P19AN Speaker - Left Rear Trim Panel
P19AP Speaker - Right Rear Trim Panel

Speakers - Doors (UQH)

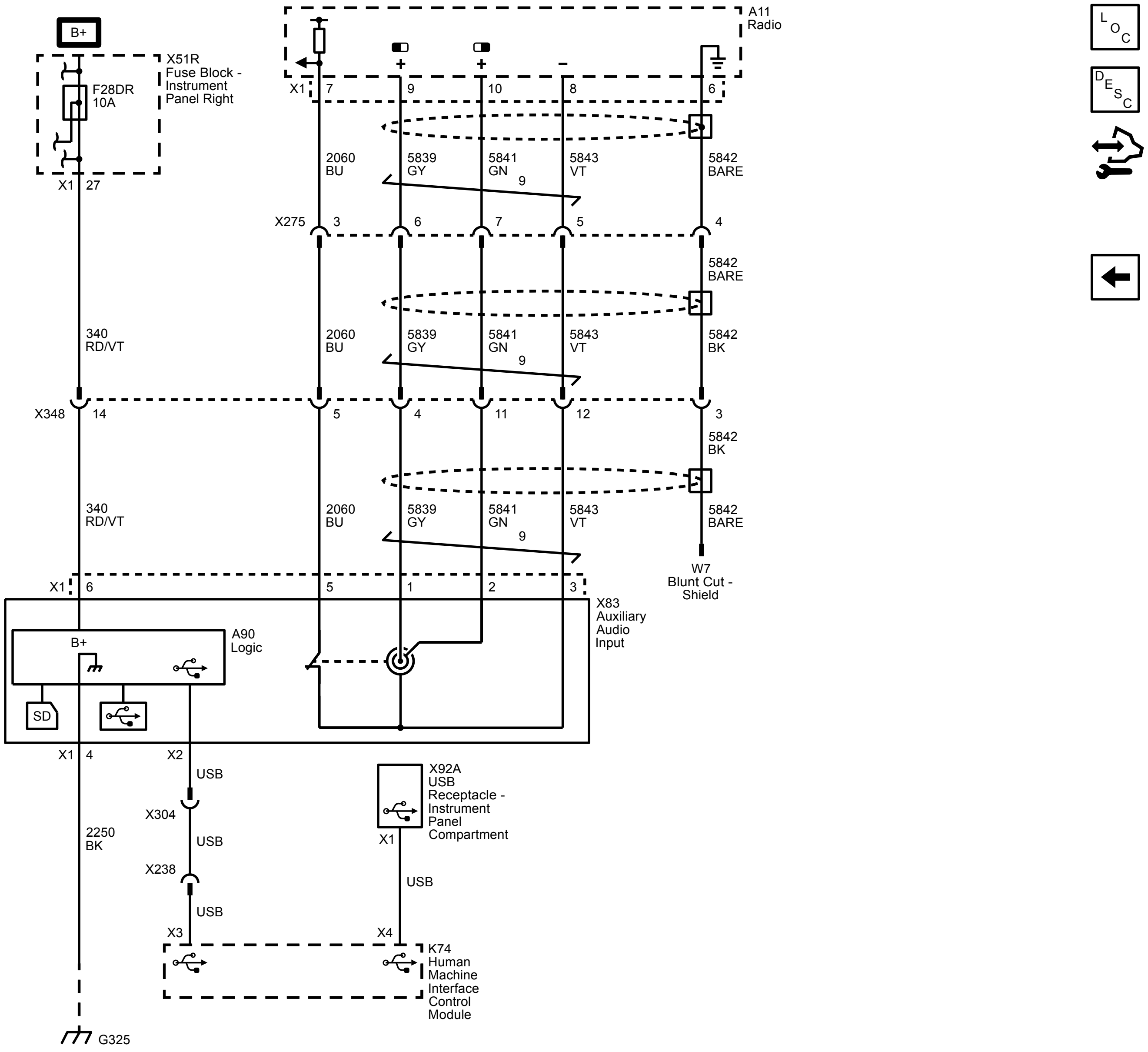


P19HD Speaker - Left Front Door Tweeter
P19DD Speaker - Left Front Door Woofer
P19AG Speaker - Left Front Door
P19AH Speaker - Right Front Door
P19PD Speaker - Right Front Door Woofer
P19VD Speaker - Right Front Door Tweeter
1
2
118 BN/BU
201 BU
1856 YE/BU
1956 YE/GY
1852 BN/GN
1952 VT/BN
200 YE
117 YE/BK
9
X505
38
39
20
21
X605
X500
10
23
22
X600
X1
3
7
X2
X3
8
16
6
+
−
T3 Audio Amplifier
15
14
199 GN
116 GN/BK
46 WH
115 BU/BK
X700
X800
J710
J711
J811
J810
X705
X805
P19M Speaker - Left Rear Tweeter
P19AL Speaker - Left Rear Door
P19AM Speaker - Right Rear Door
P19Z Speaker - Right Rear Tweeter

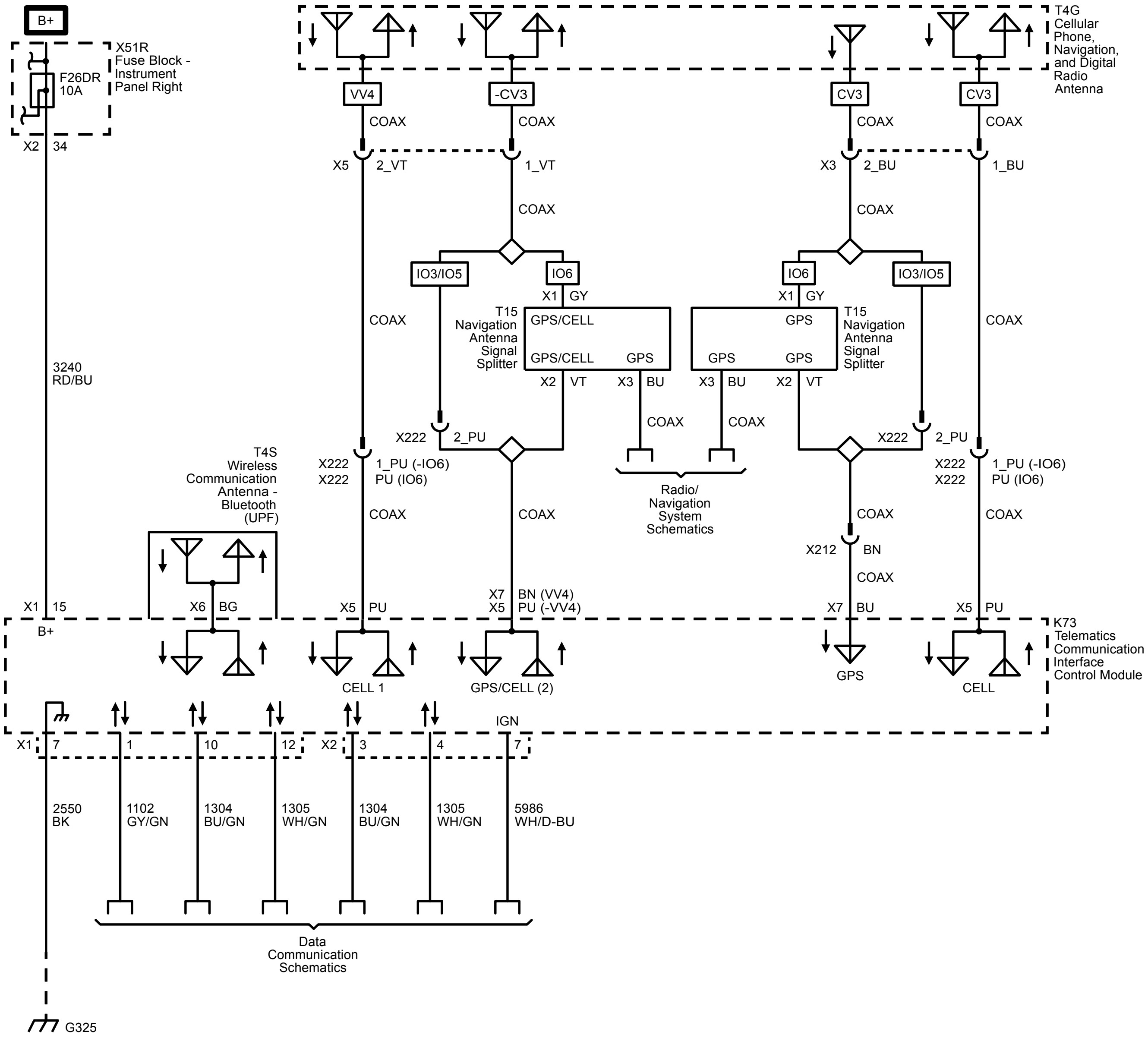
Auxiliary Inputs (D07/DCK)



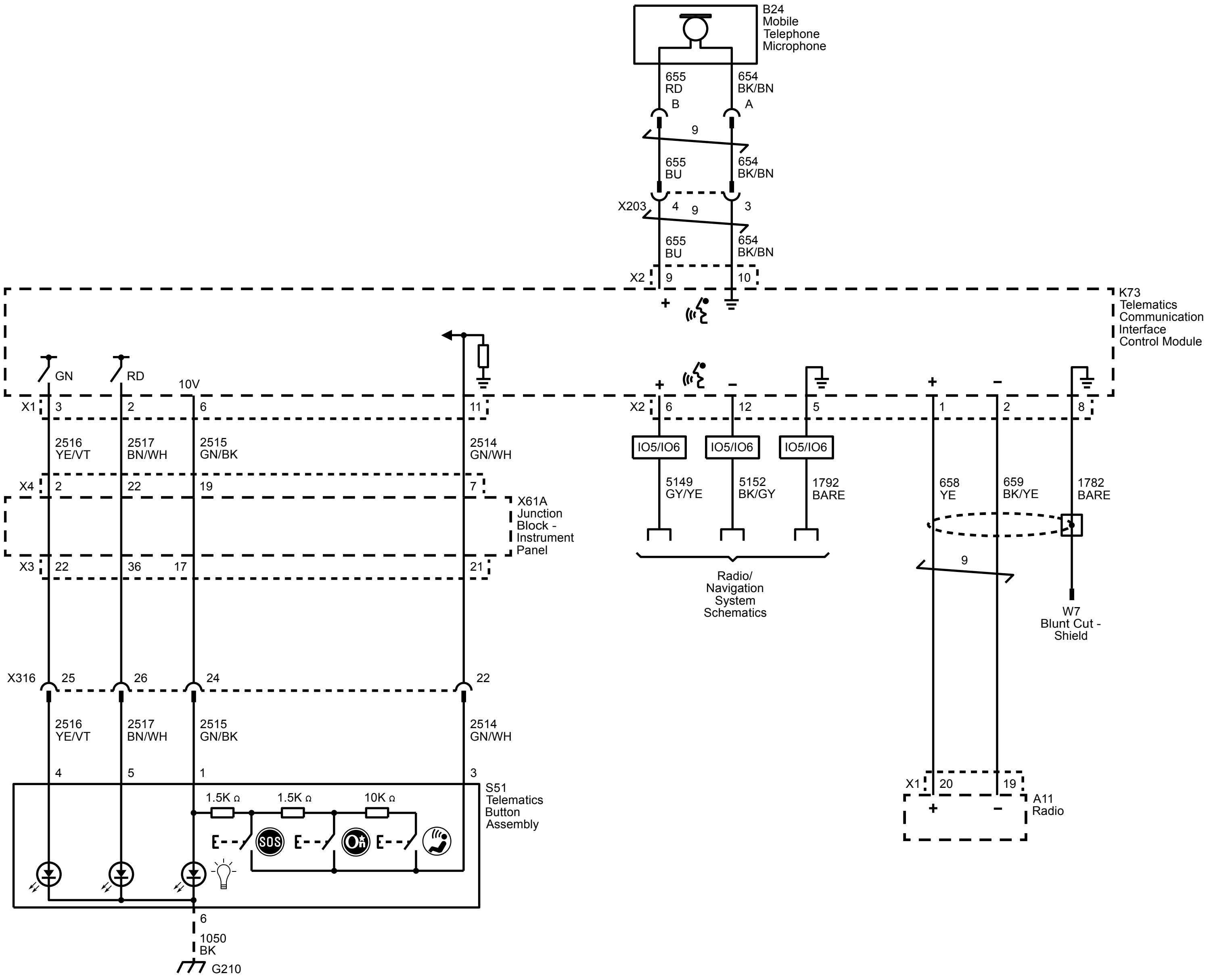
B+
X51R
Fuse Block - Instrument Panel Right
F29DR
20A
X2
17
340
RD/VT
J250
340
RD/VT
X300
42
340
RD/VT
340
RD/VT
Z75
X88/Z88
X307
7
340
RD/VT
A11
Radio
X1
7
9
10
8
6
2060
BU
5839
GY
5841
GN
5843
VT
5842
BARE
9
X300
4
35
34
14
13
2060
BU
5839
GY
5841
GN
5843
VT
5842
BARE
9
W7
Blunt Cut - Shield
X1
6
B+
A90
Logic
X92
USB Receptacle
X1
6
B+
A90
Logic
SD
5
1
2
3
X83
Auxiliary Audio Input
X1
4
2550
BK
X3
USB
X2
USB
X303
USB
USB
X1
X92A
USB Receptacle - Instrument Panel Compartment
X4
X2
USB
X302
X302
BK (-U42)
X_BK (U42)
USB
X3
K74
Human Machine Interface Control Module
X1
4
2250
BK
G325


B+
X51R Fuse Block - Instrument Panel Right
F28DR 10A
X1 27
340 RD/VT
X348 14
340 RD/VT
A11 Radio
X1 7 9 10 8 6
+ + –
2060 BU
5839 GY
5841 GN
5843 VT
5842 BARE
9
X275 3 6 7 5 4
5842 BARE
5842 BK
X348 5 4 11 12 3
5842 BK
5842 BARE
W7 Blunt Cut - Shield
X1 6 5 1 2 3
X83 Auxiliary Audio Input
A90 Logic
B+
SD
X1 4
X2
USB
X304
X238
2250 BK
G325
X92A USB Receptacle - Instrument Panel Compartment
X1
X3
X4
K74 Human Machine Interface Control Module
LOC
DESC

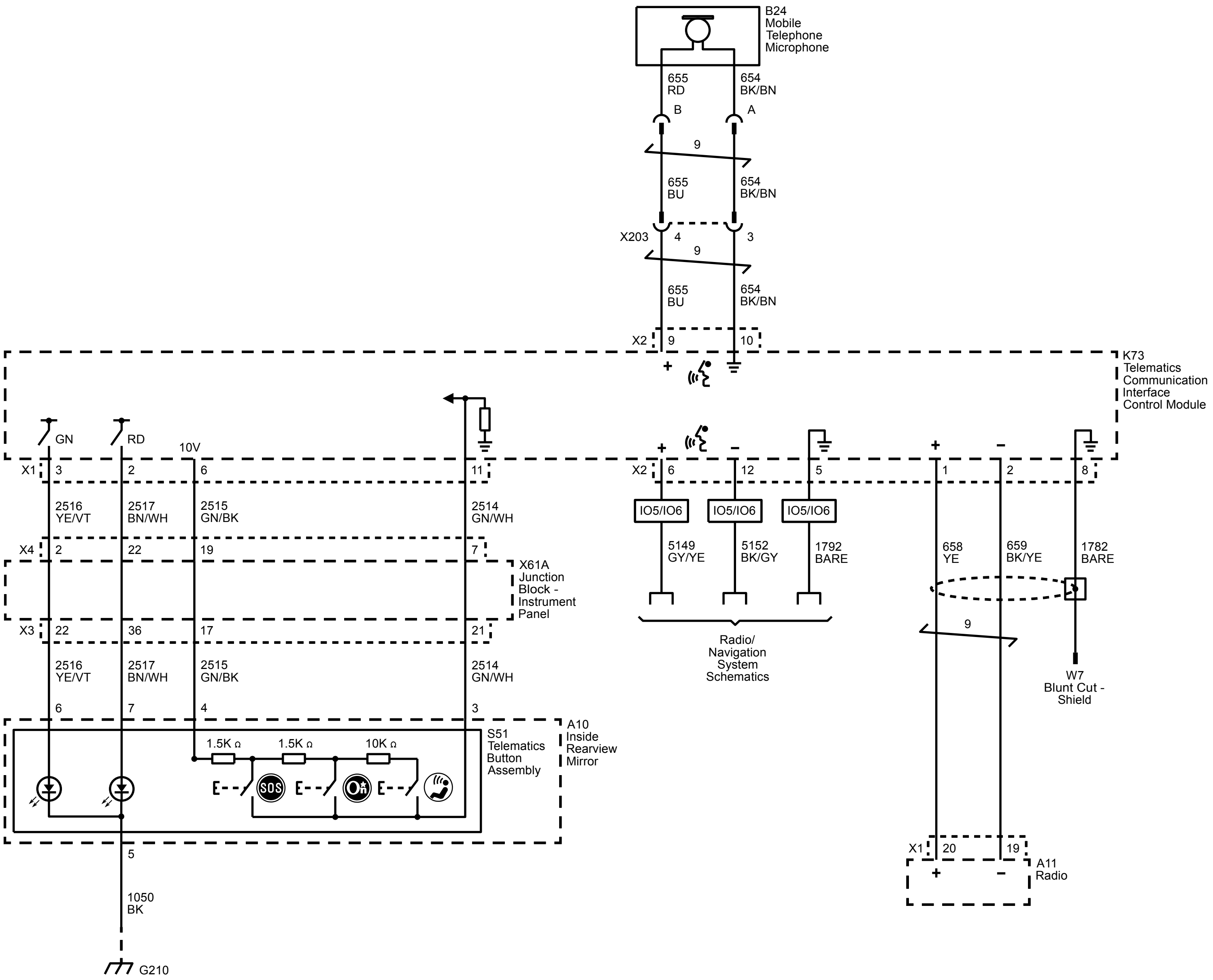
Power, Ground, Serial Data and Antennas


B+
X51R
Fuse Block - Instrument Panel Right
F26DR
10A
X2 34
3240
RD/BU
T4G
Cellular Phone, Navigation, and Digital Radio Antenna
VV4
-CV3
CV3
CV3
COAX
X5 2_VT
1_VT
X3 2_BU
1_BU
IO3/IO5
IO6
X1 GY
T15
Navigation Antenna Signal Splitter
GPS/CELL
GPS
X2 VT
X3 BU
X222 2_PU
X222 1_PU (-IO6)
X222 PU (IO6)
Radio/ Navigation System Schematics
T4S
Wireless Communication Antenna - Bluetooth (UPF)
X212 BN
X1 15
X6 BG
X5 PU
X7 BN (VV4)
X5 PU (-VV4)
X7 BU
X5 PU
B+
CELL 1
GPS/CELL (2)
GPS
CELL
K73
Telematics Communication Interface Control Module
IGN
X1 7
1
10
12
X2 3
4
7
2550
BK
1102
GY/GN
1304
BU/GN
1305
WH/GN
1304
BU/GN
1305
WH/GN
5986
WH/D-BU
Data Communication Schematics
G325

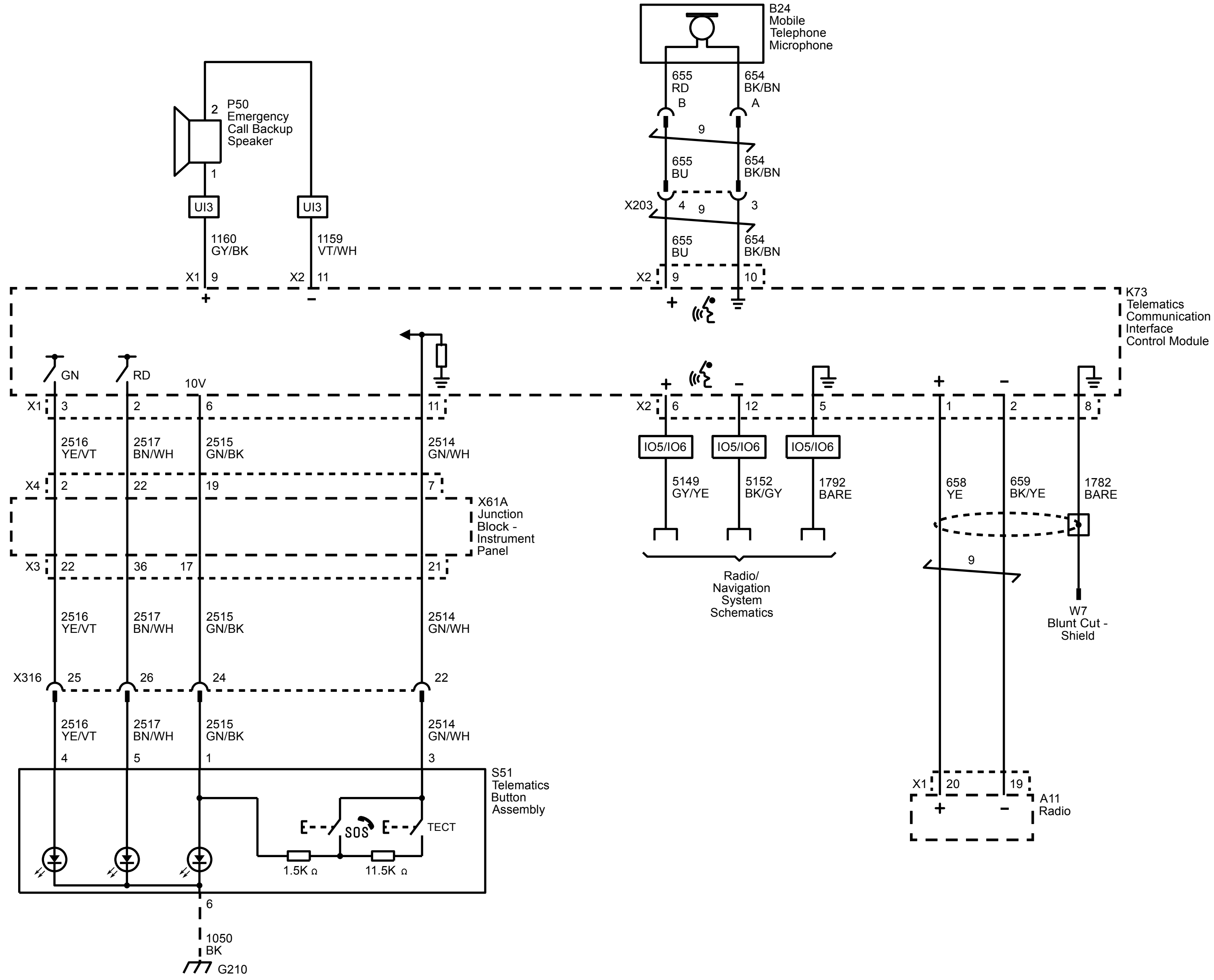
Controls and Audio Signals (UE1 With DRZ)


B24
Mobile
Telephone
Microphone
655
RD
B
654
BK/BN
A
9
655
BU
654
BK/BN
X203
4
9
3
655
BU
654
BK/BN
X2
9
10
+
K73
Telematics
Communication
Interface
Control Module
GN
RD
10V
X1
3
2
6
11
+
-
X2
6
12
5
+
-
1
2
8
2516
YE/VT
2517
BN/WH
2515
GN/BK
2514
GN/WH
IO5/IO6
IO5/IO6
IO5/IO6
5149
GY/YE
5152
BK/GY
1792
BARE
658
YE
659
BK/YE
1782
BARE
X4
2
22
19
7
X61A
Junction
Block -
Instrument
Panel
X3
22
36
17
21
Radio/
Navigation
System
Schematics
9
W7
Blunt Cut -
Shield
X316
25
26
24
22
2516
YE/VT
2517
BN/WH
2515
GN/BK
2514
GN/WH
4
5
1
3
S51
Telematics
Button
Assembly
1.5K Ω
1.5K Ω
10K Ω
SOS
X1
20
19
+
-
A11
Radio
6
1050
BK
G210

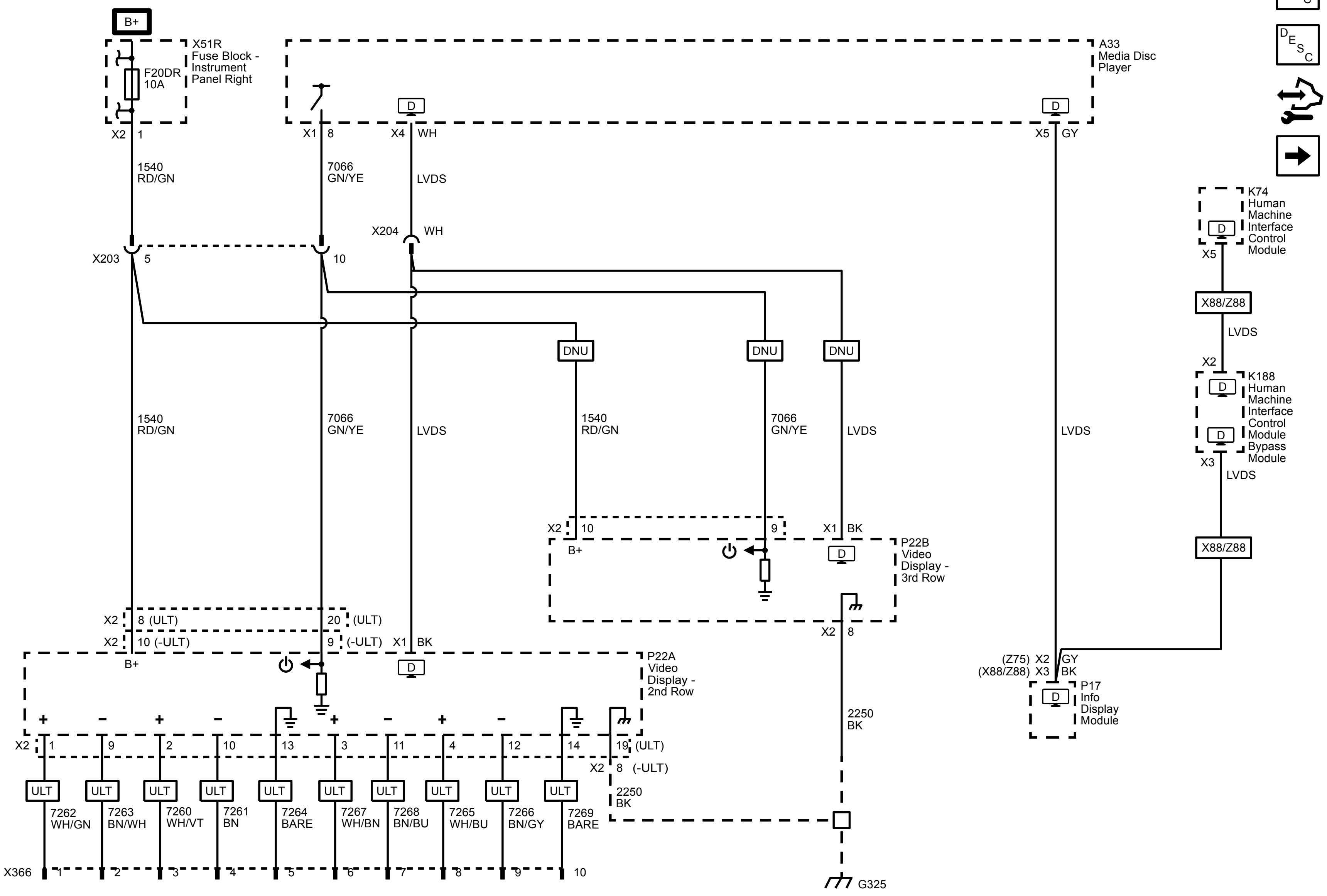
Controls and Audio Signals (UE1 Without DRZ)

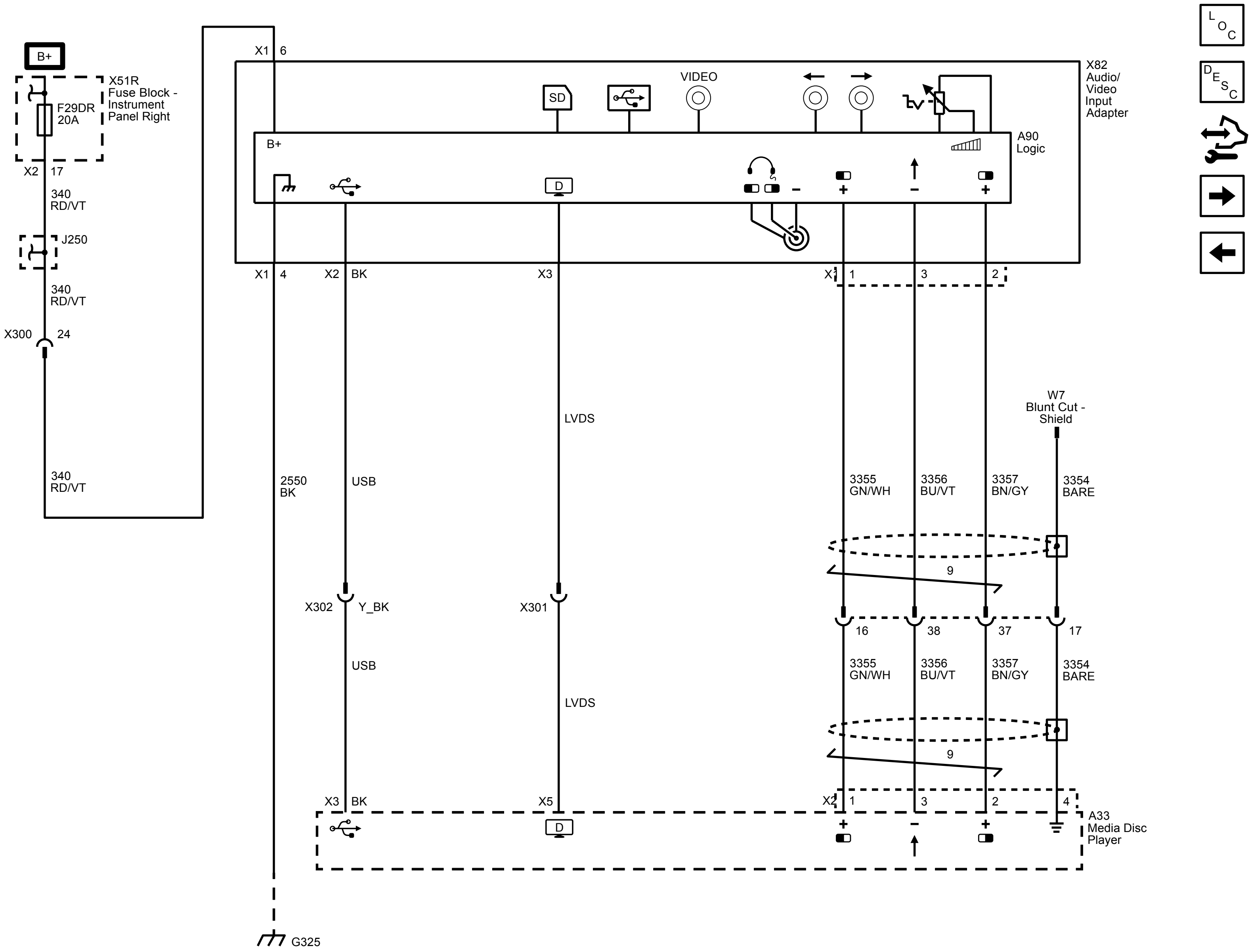

B24 Mobile Telephone Microphone
655 RD
654 BK/BN
B
A
9
655 BU
654 BK/BN
X203
4
3
9
655 BU
654 BK/BN
X2
9
10
+
K73 Telematics Communication Interface Control Module
GN
RD
10V
+
–
+
–
X1
3
2
6
11
X2
6
12
5
1
2
8
2516 YE/VT
2517 BN/WH
2515 GN/BK
2514 GN/WH
IO5/IO6
IO5/IO6
IO5/IO6
5149 GY/YE
5152 BK/GY
1792 BARE
658 YE
659 BK/YE
1782 BARE
X4
2
22
19
7
X61A Junction Block - Instrument Panel
X3
22
36
17
21
Radio/ Navigation System Schematics
9
W7 Blunt Cut - Shield
2516 YE/VT
2517 BN/WH
2515 GN/BK
2514 GN/WH
6
7
4
3
A10 Inside Rearview Mirror
S51 Telematics Button Assembly
1.5K Ω
1.5K Ω
10K Ω
SOS
5
1050 BK
G210
X1
20
19
+
–
A11 Radio

Controls and Audio Signals (UI3)

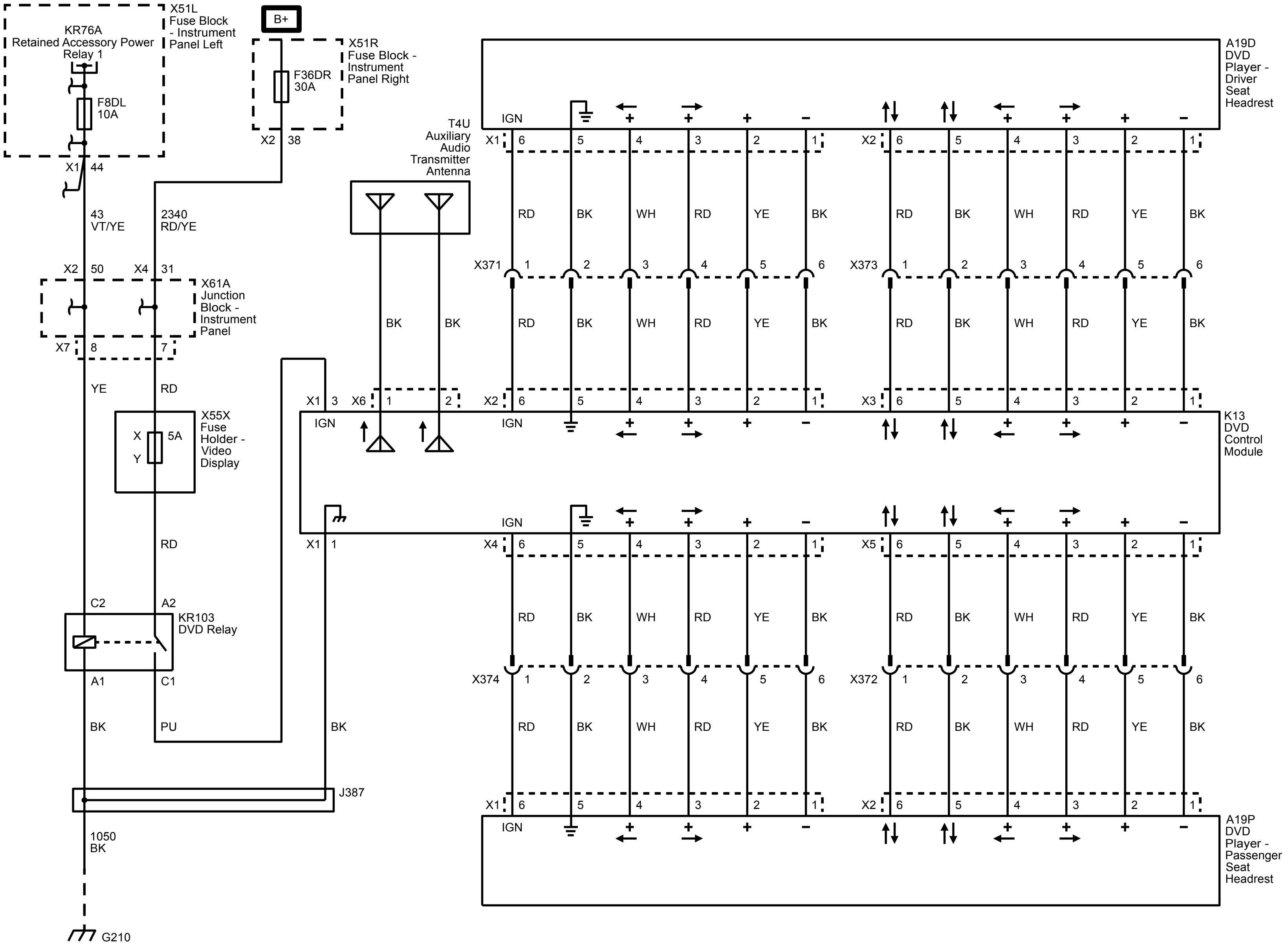

B24
Mobile
Telephone
Microphone
655
RD
B
654
BK/BN
A
9
655
BU
654
BK/BN
X203
4
9
3
655
BU
654
BK/BN
X2
9
10
P50
Emergency
Call Backup
Speaker
2
1
UI3
UI3
1160
GY/BK
1159
VT/WH
X1
9
X2
11
+
−
+
K73
Telematics
Communication
Interface
Control Module
GN
RD
10V
X1
3
2
6
11
X2
6
12
5
1
2
8
2516
YE/VT
2517
BN/WH
2515
GN/BK
2514
GN/WH
IO5/IO6
IO5/IO6
IO5/IO6
5149
GY/YE
5152
BK/GY
1792
BARE
658
YE
659
BK/YE
1782
BARE
X4
2
22
19
7
X61A
Junction
Block -
Instrument
Panel
X3
22
36
17
21
9
Radio/
Navigation
System
Schematics
W7
Blunt Cut -
Shield
2516
YE/VT
2517
BN/WH
2515
GN/BK
2514
GN/WH
X316
25
26
24
22
2516
YE/VT
2517
BN/WH
2515
GN/BK
2514
GN/WH
4
5
1
3
S51
Telematics
Button
Assembly
SOS
TECT
1.5K Ω
11.5K Ω
6
1050
BK
G210
X1
20
19
A11
Radio
+
−

Video Display - 2nd Row (U42) and 3rd Row (DNU) Power and Ground


B+
X51R
Fuse Block -
Instrument
Panel Right
F20DR
10A
X2
1
1540
RD/GN
A33
Media Disc
Player
D
X1
8
X4
WH
X5
GY
7066
GN/YE
LVDS
X204
WH
X203
5
10
DNU
DNU
DNU
1540
RD/GN
7066
GN/YE
LVDS
1540
RD/GN
7066
GN/YE
LVDS
LVDS
K74
Human
Machine
Interface
Control
Module
X5
X88/Z88
LVDS
X2
K188
Human
Machine
Interface
Control
Module
Bypass
Module
X3
LVDS
X88/Z88
X2
10
9
X1
BK
B+
P22B
Video
Display -
3rd Row
X2
8
2250
BK
X2
8 (ULT)
20
(ULT)
X2
10 (-ULT)
9
(-ULT)
X1
BK
B+
P22A
Video
Display -
2nd Row
(Z75)
X2
GY
(X88/Z88)
X3
BK
P17
Info
Display
Module
+
-
+
-
+
-
+
-
X2
1
9
2
10
13
3
11
4
12
14
19
(ULT)
X2
8
(-ULT)
2250
BK
ULT
7262
WH/GN
7263
BN/WH
7260
WH/VT
7261
BN
7264
BARE
7267
WH/BN
7268
BN/BU
7265
WH/BU
7266
BN/GY
7269
BARE
X366
1
2
3
4
5
6
7
8
9
10
G325


L O C
D E S C
B+
X51R
Fuse Block - Instrument Panel Right
F29DR 20A
X2 17
340 RD/VT
J250
340 RD/VT
X300 24
340 RD/VT
X1 6
X82 Audio/ Video Input Adapter
SD
VIDEO
A90 Logic
B+
D
X1 4
X2 BK
X3
X1 1 3 2
LVDS
2550 BK
USB
W7 Blunt Cut - Shield
3355 GN/WH
3356 BU/VT
3357 BN/GY
3354 BARE
9
X302 Y_BK
X301
16 38 37 17
USB
LVDS
3355 GN/WH
3356 BU/VT
3357 BN/GY
3354 BARE
9
X3 BK
X5
X2 1 3 2 4
A33 Media Disc Player
D
G325

Dual DVD Headrest System (AYE)


KR76A
Retained Accessory Power Relay 1
X51L
Fuse Block - Instrument Panel Left
F8DL
10A
X1
44
B+
X51R
Fuse Block - Instrument Panel Right
F36DR
30A
X2
38
43
VT/YE
2340
RD/YE
X2
50
X4
31
X61A
Junction Block - Instrument Panel
X7
8
7
YE
RD
X55X
Fuse Holder - Video Display
X
Y
5A
RD
C2
A2
KR103
DVD Relay
A1
C1
BK
PU
BK
J387
1050
BK
G210
T4U
Auxiliary Audio Transmitter Antenna
BK
BK
X1
3
X6
1
2
IGN
X1
1
A19D
DVD Player - Driver Seat Headrest
IGN
X1
6
5
4
3
2
1
X2
6
5
4
3
2
1
RD
BK
WH
RD
YE
BK
RD
BK
WH
RD
YE
BK
X371
1
2
3
4
5
6
X373
1
2
3
4
5
6
RD
BK
WH
RD
YE
BK
RD
BK
WH
RD
YE
BK
X2
6
5
4
3
2
1
X3
6
5
4
3
2
1
K13
DVD Control Module
IGN
IGN
X4
6
5
4
3
2
1
X5
6
5
4
3
2
1
RD
BK
WH
RD
YE
BK
RD
BK
WH
RD
YE
BK
X374
1
2
3
4
5
6
X372
1
2
3
4
5
6
RD
BK
WH
RD
YE
BK
RD
BK
WH
RD
YE
BK
X1
6
5
4
3
2
1
X2
6
5
4
3
2
1
IGN
A19P
DVD Player - Passenger Seat Headrest

LOC
DESC

Description and Operation

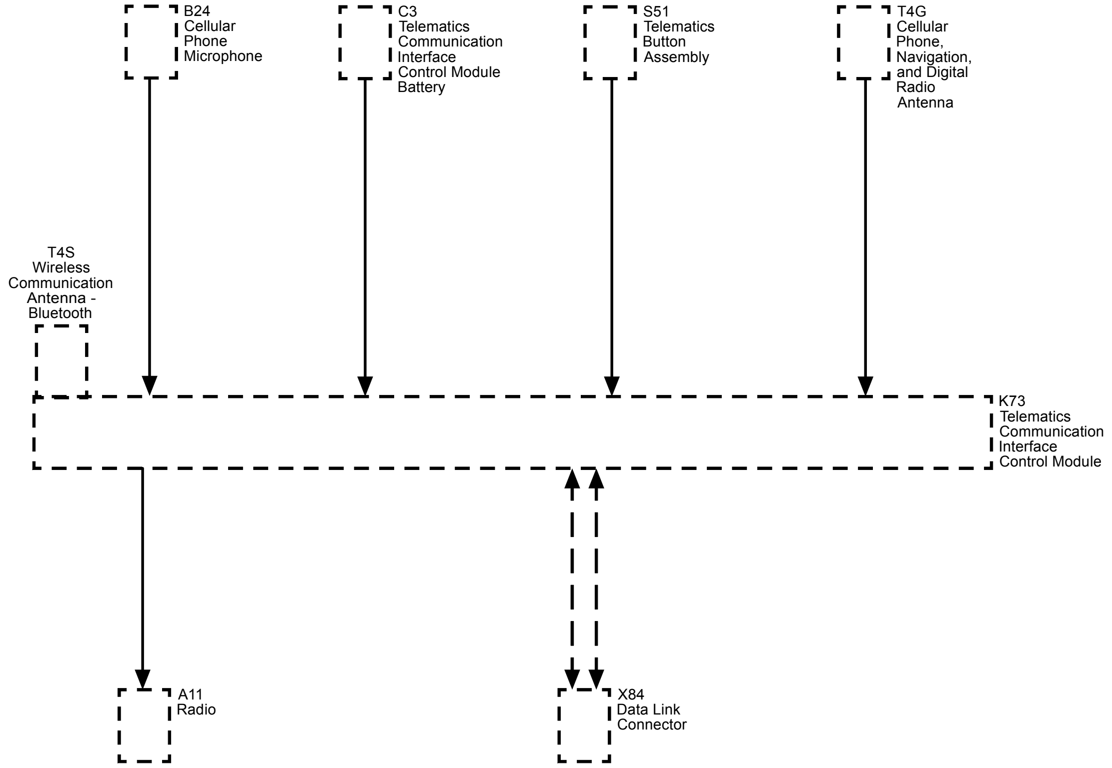
OnStar Description and Operation (UE1)

This OnStar® system consists of the following components:

- Telematics communication interface control module
- OnStar® three button assembly
- Microphone
- Cellular antenna
- Navigation antenna
- Bluetooth® antenna (If equipped)
- Back up battery (If equipped)
- WiFi Hotspot (If equipped)
- TTY (Teletypewriter)

This system also interfaces with the factory installed vehicle audio system.

Onstar Block Diagram


B24 Cellular Phone Microphone
C3 Telematics Communication Interface Control Module Battery
S51 Telematics Button Assembly
T4G Cellular Phone, Navigation, and Digital Radio Antenna
T4S Wireless Communication Antenna - Bluetooth
K73 Telematics Communication Interface Control Module
A11 Radio
X84 Data Link Connector

Telematics Communication Interface Control Module

The OnStar Generation 10 system uses Global System for Mobile Communication (GSM) to communicate data and voice signals over the national cellular network. The module may also have the ability to act as a Wireless Local Area Network (WLAN) Wi-Fi hotspot similar to a home wireless router. The module houses an internal WLAN antenna enabling hotspot connectivity and streaming high speed media to the entertainment system. The module also may enable Teletypewriter (TTY) and be capable of Bluetooth communication utilizing an internal antenna. The module is capable of up to 4G LTE speeds and houses 2 technology systems, one to process Global Positioning System (GPS) data, and another for cellular information. The module sends and receives all cellular communications over two cellular antennas and cellular antenna coax cables.

The OnStar Gen 10 system has two antenna inputs, a primary cellular signal and a combined GPS/secondary cellular signal. The OnStar® system uses the Unitied States Global Positioning System (GPS) signals to provide location on demand. GPS is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near Earth where there is an unobstructed line of sight to four or more GPS satellites.

The module also has the capability of activating certain features such as, the horn, remote engine starting, initiating door lock/unlock, or activating the exterior lamps using the serial data circuits. These functions can be commanded by the OnStar® Call Center per a customer request or mobile device app depending on vehicle and customer subscription.

Dedicated circuits are used to connect the telematics communication interface control module to a microphone, the button assembly, radio, and if equipped the Back Up Battery (BUB). The telematics communication interface control module communicates with the rest of the vehicle over the serial data bus.

Power is provided by a dedicated, fused B+ circuit. Ground is provided through the vehicle wiring harness attached to the module. The power mode state is determined by the telematics communication interface control module through serial data messaging.

OnStar® Three Button Assembly

- The OnStar® button assembly may be part of the rearview mirror, or a separate, stand alone unit. The button assembly is comprised of 3 buttons or 3 capacitive touch buttons and status LED’s or an error indicator. The buttons are defined as follows:
    - The answer/end button, which is black with a white phone icon or a white driver figure seated with voice signals near its face, allows the user to answer and end calls or initiate speech recognition.
    - The blue OnStar® call center button, which displays the OnStar® logo, allows the user to connect to the OnStar® call center.
    - The emergency button, which displays white letters “SOS” with red background, sends a high priority emergency call to the OnStar® call center when pressed.

If the LED does not illuminate, this may indicate that the customers OnStar® subscription is not active or has expired. Push the blue OnStar button to connect to an advisor who can then verify the account status.

The telematics communication interface control module supplies 10 volts to the OnStar® button assembly on the keypad supply voltage circuit. When pressed, each button completes a circuit across a resistor allowing a specific voltage to be returned to the telematics communication interface control module on the keypad signal circuit. Depending upon the voltage range returned the telematics communication interface control module is able to identify which button has been pressed.

The OnStar® status LED or error indicator is located near the buttons. The LED is green when the system is ON and operating normally. When any indicator is illuminated and flashing, it is an indication that a call is in progress. When the LED is red, this indicates a system malfunction is present. In the event there is a system malfunction and the OnStar® system is still able to make a call, the LED will flash red during the call.

Each LED or error indicator is controlled by either the telematics communication interface control module over dedicated LED signal circuits or by low speed GM LAN serial data depending on the inside rearview mirror option. Ground for the LED is provided by the wiring harness attached to the button assembly.

Secondary OnStar® Controls

Some vehicles may have an additional button that when pushed can engage the OnStar® system. The button may be a symbol of a face with sound waves, or may say MUTE, or be a symbol of a radio speaker with a slash through it.

By engaging the OnStar® system with this feature, the user can interact with the system by use of voice commands. A complete list of these commands is supplied in the information provided to the customer. If the information is not available for reference, at any command prompt the user can say "HELP" and the telematics communication interface control module will return an audible list of available commands.

OnStar® Microphone

The cellular microphone can be part of the rearview mirror assembly, or a stand-alone unit in the headliner or roof console. In either case, the telematics communication interface control module supplies approximately 10V to the microphone on the cellular microphone signal circuit. The microphone modifies the 10V depending on the volume and voice being detected. A cellular microphone low reference circuit or a drain wire provides a ground for the microphone. The microphone signal circuits pass through the telematics communication interface control module to support entertainment voice recognition.

Cellular and GPS Antennas

The combination antenna will have any of the following antenna elements when equipped with OnStar:

- Primary cellular element
- Secondary cellular element
- GPS element
- Digital radio element
- AM/FM element

The Gen 10 OnStar® system uses 2 cellular antenna elements to send and receive cellular data, the primary cellular element and the secondary cellular element. The primary cellular signal is carried by a coax cable that connects the antenna directly to the telematics communication interface control module. Details of the secondary cellular signal are further described below.

The GPS antenna element is used to collect the signals of the orbiting GPS satellites. Within the antenna is housed a low noise amplifier that allows for a more broad and precise reception of this data. Also housed within the antenna is circuitry to combine the GPS signal and the secondary cellular signal. Without navigation, the combination GPS/secondary cellular signal is carried by a coax cable that connects directly to the telematics communication interface control module. The cable also provides a path for DC current for powering the antenna. With navigation, the combination GPS/secondary cellular signal is carried by a coax cable that connects to the navigation signal splitter. The splitter supplies the GPS signal to the navigation/entertainment system and the GPS/cellular signal to the telematics communication interface control module.

The digital radio element collects digital radio signals from two satellites and where necessary terrestrial repeaters. The digital radio signal is carried by a coax cable and connected to the digital radio receiver. Refer to Radio/Audio System Description and Operation for further details.

The radio signal is sent from a broadcast station and is then received by the AM/FM radio antenna element. The AM/FM radio signal is carried by a coax cable and is connected to the radio. Refer to Radio/Audio System Description and Operation for further details.

OnStar® RemoteLink

OnStar® RemoteLink is a mobile app to link mobile devices to a vehicle for limited diagnostics and feature controls. After downloading the app and registering the device, vehicle owners with an eligible vehicle can use their mobile devices to access real-time data from their vehicle and perform specific commands remotely.

All communication between the app and the vehicle is powered by OnStar's® advanced connected vehicle technology. An active OnStar® account as well as a valid OnStar® username and password are required to use the app. The remote commands must be enabled by logging into the user’s OnStar® account prior to using the app. Refer to the owners manual for available vehicle data and control features.

Compass Heading

The telematics communication interface module has a compass feature to calculate vehicle direction which is displayed via the instrument panel cluster or designated display. The compass heading is determined by dead reckoning until the GPS 3d fix is established. The dead reckoning is accomplished by using the yaw rate sensors and wheel ticks to determine heading changes from a GPS known heading. The GPS 3d fix heading is determined by the deferential of two locations. If “CAL” is displayed on the Instrument Panel Cluster or designated display refer to the owners manual for steps to calibrate the compass.

Bluetooth® (If Equipped)

Bluetooth® wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security. Only vehicles with steering wheel controls will have Bluetooth® functionality. In order to utilize the vehicle’s Bluetooth® system, a Bluetooth® equipped cellular phone is required.

The Bluetooth® antenna is internal to the telematics communication interface control module, radio or human machine interface module and is used to send and receive signals from a Bluetooth® enabled cellular phone. The available features and functions are determined by the software within the device being used and the telematics communication interface control module. The operating range of the signal from the vehicle is approximately 30 feet. Note that the operating range is dependent upon the cellular phone being used and battery level of the phone.

With Bluetooth® technology customers can experience hands-free calling as their Bluetooth® capable cellular phones are wirelessly connected to the vehicle. It will allow customers to place and receive calls using the steering wheel controls and voice recognition. The vehicle audio system will allow you to listen to your call through the vehicle speakers and adjust volume through steering wheel or radio controls.

Not all Bluetooth® cellular phones are guaranteed to work with the vehicle’s Bluetooth® system. Based on the cellular phone’s service provider and the manufacturer’s implementation of Bluetooth®, not all phones support all available Bluetooth® functionality. Bluetooth® enabled cellular phones will be tested for vehicle compatibility and a feature compatibility list will be provided via the GM Bluetooth® website: http://www.gm.com/vc/bluetooth/

Bluetooth® Features Supported

The following is a list of features supported by the Bluetooth® system. Note that not all devices will support all of the listed functions.

- Automatic reconnection – highest priority phone will automatically be connected to vehicle when vehicle ignition is on
- Hands-free dialing- via digits, redial, name tags (phone number saved to a nametag via voice recognition)
- Answering a call
- Ending a call
- Mute a Call
- Rejecting a call – ignore an incoming call
- Call Waiting
- Three-way Calling – initiated from hands-free system
- Send Number During a Call – this is used when calling a menu-driven phone system
- Transfer a Call – transfer call from vehicle to cellular phone and visa versa
- Voice Pass-Thru – allow access to the voice recognition commands on the cellular phone

Pairing a Bluetooth® Cellular Phone to the Vehicle

In order to use hands-free calling, the cellular phone must be paired to the vehicle. Up to five devices can be paired to the vehicle at one time, but only one can be connected at any given time. To pair a phone, the customer must know how to operate the Bluetooth® functionality of their phone. The pairing process must only be done one time for each phone, unless that phone’s information is deleted. The system will always generate a password and will provide that password if the device you are pairing does not support Secure Simple Pairing (SSP). If the device being paired does support SSP the system will not provide the password and automatically pair the device. For safety reasons, the pairing process is disabled while the vehicle is moving.

Once the Bluetooth® cellular phone has been paired with vehicle, it will automatically connect to the vehicle when the ignition is on and the device is on. When more than one paired phone is in the vehicle, the phone with the highest priority will be connected. If the cellular phone is in use while getting into the vehicle, the phone can be switched to hands-free mode with the press of a button. In addition, a call in progress can be transferred from the vehicle hands-free mode to the phone to continue the call as the customer exits the vehicle.

Complete pairing instructions are provided in the Vehicle Owners Manual.

Back-up Battery (If Equipped)

Note: Do not disconnect the main vehicle battery or remove the OnStar® fuse with the ignition key in any position other than OFF. Disconnecting power to the OnStar® module in any way while the ignition is ON or with retained accessory power activated may cause activation of the OnStar® Back-Up Battery. This action is per design as the back-up battery is designed to provide power to the telematics communication interface control module so an emergency notification call can be made after an event where the main battery is disabled. Once the Back-Up Battery is activated it will stay on until the power is restored back to the telematics communication interface control module. The telematics communication interface control module naturally chooses the main supply voltage as it’s default supply, but if the main supply is removed or lost for any reason the OnStar® module will use the Back-Up Battery as a power supply as long as the default supply can not be detected. The back-up battery is not rechargeable and once discharged below 9.5 volts the back-up battery must be replaced.

Certain OnStar® equipped vehicles may also be equipped with a back-up battery. The back-up battery is a non-rechargeable, lithium battery intended to provide an auxiliary power source for the telematics communication interface control module in the event where power from the main vehicle battery is lost.

The back-up battery is intended to have a limited life span of approximately 4 years and is designed to maintain an open circuit voltage between 16 V and 9 V throughout this period. This allows the battery to power the basic functions of the telematics communication interface control module for least one 200 second (5 minute) call at the end of the 4 year span, should the main vehicle battery be lost. In the case of a vehicle losing vehicle battery power, OnStar will switch over to the backup battery based on an internal algorithm. It will look for an air-bag deploy, or near-deploy, messages from the SDM. If there are no messages the OnStar module will stay wake for a few minutes longer and monitor the buttons in the mirror. If not pressed, the modules will power down and shut off completely.

The back-up battery is connected to the telematics communication interface control module through the back-up battery positive voltage circuit and back-up battery ground circuit and is protected from a short circuit by means of an internal fuse. In the event the back-up battery, battery positive voltage circuit is shorted to the back-up battery ground circuit or chassis ground, the fuse will open and render the back-up battery permanently inoperable. The status of the back-up battery and its associated wiring is monitored by the telematics communication interface control module.

WiFi Hotspot

The telematics communication interface control module acts as a Wireless Local Area Network (WLAN) WiFi hotspot router and uses direct 4G LTE connectivity to the internet. It has the ability to connect up to 7 devices at one time. A data plan is required and when purchased, a security default password is established. There are several ways to change the SSID or password, by placing a call to the OnStar Call Center, by using the Gen 10 mobile app or through the scan tool.

The system utilizes a secure autoconnect feature between the telematics communication interface control module and the radio/HMI. No user interaction is required, it is always available and ready to connect to a dedicated in car device. The ignition must be in Run, Accessory or RAP for WiFi to operate.

Audio System Interface

When the OnStar® requires audio output, a serial data message is sent to the audio system to mute all radio functions and transmit OnStar® originated audio. The OnStar® audio is transmitted to the vehicle audio system by a dedicated signal circuit and a low reference circuit.

The audio system will mute and an audible ring will be heard though the speakers if the vehicle receives a call with the radio ON.

On some vehicles, the HVAC blower speed may be reduced when the OnStar® system is active to aid in reducing interior noise. When the system is no longer active, the blower speed will return to its previous setting.

OnStar® Sleep Cycle

The OnStar® system uses a unique sleep cycle to allow the system to receive cellular calls while the ignition is in the OFF position and retained accessory power mode has ended. This cycle enables the telematics communication interface control module to perform remote functions, such as door unlock, as commanded over the air by the OnStar® Call Center, and to continue to maintain an acceptable level of battery electrical drain.

The OnStar® system uses 4 states of readiness, depending upon the type of cellular market the vehicle is in when the ignition is put into the OFF state:

- High power
- Low power
- Sleep
- Digital standby

The high power state is in effect whenever the ignition is in the ON or RUN position, or retained accessory power is enabled, and the OnStar® system is sending or receiving calls or when the system is performing a remote function.

The low power state is in effect when the OnStar® system is idle with the ignition in the ON or RUN position, or with retained accessory power enabled.

The sleep state is entered after the vehicle has been shut off and the retained accessory power has timed out while in an analog cellular area. At a predetermined time recorded within the telematics communication interface control module, the system re-enters the low power state to listen for a call from the OnStar® Call Center for 1 minute. After this interval, the system will again return to the sleep state for 9 minutes. If a call is sent during the 1 minute interval, the OnStar® system will receive the call and immediately go into the high power mode to perform any requested functions. If no call is received during the 1 minute interval, the system will go back into the sleep mode for another 9 minutes. This process will continue for up to 48 hours, after which the OnStar® system will turn off until the ignition is turned to the ON or RUN position.

The digital standby power state is entered after the vehicle has been shut off and the retained accessory power has timed out while in a digital cellular area. When in digital standby mode, the OnStar® module is able to perform all remote functions as commanded by an OnStar® advisor at any time, for a continuous 120 hours. After 120 hours, the OnStar® module will go into sleep mode until a wake up signal from the vehicle is seen by the telematics communication interface control module. If the OnStar module loses the digital cellular signal it will revert to analog mode and follow the standard sleep state (9 minutes OFF, 1 minute standby) based on the time of the GPS signals, this will continue until a digital cellular signal is again received.

If the OnStar® system loses battery power while the system is in a standby or sleep mode, the system will remain OFF until battery power is restored and the ignition is turned to the ON or RUN position.

Features

OnStar® Personal Calling

The hands free, OnStar® personal calling cellular phone feature is an additional feature of the OnStar® system. This feature is embedded within the telematics communication interface control module; however it must be activated by an OnStar® advisor. OnStar® personal calling operates similar to most hand held cellular phones in that the availability for its usage is based on minutes or units. The customer must have a current OnStar® subscription, as this feature cannot be utilized without it. To use OnStar® personal calling, the customer must also purchase units (minutes) as outlined in the owners guide provided with the OnStar® system. Units begin to deplete, 1 unit is equal to 1 minute, as the customer makes outbound phone calls, answers inbound phone calls, or while connected to the OnStar® virtual advisor. In addition, units may also have an expiration date, depending upon the type of units purchased.

Customers have the ability to store telephone numbers within the module, referenced by a nametag for the convenience of frequently dialed numbers. After storing a nametag, the user can dial this number by initiating the OnStar® personal calling feature, speaking the word "call," and repeating the nametag assigned.

Turn by Turn Navigation

Turn by Turn Navigation allows the driver to contact OnStar® to obtain directions for driving from a current location to a desired location. The Turn by Turn Navigation system stores your planned route and continually checks your position along that route, when you deviate from the planned route, the system will recognize this and prompt the driver with verbal prompts for how to proceed. The driver then responds verbally to direct the system to continue the current routing or to recalculate the route because of a missed turn.

Advisor Record Feature

The Advisor Record Feature allows the user to store any information given during a call with an OnStar® Advisor. Recording is activated by pressing the blue OnStar button during a call; pressing the button a second time stops the recording. The stored information can be played back by pressing the phone button on the three button assembly and using the voice command “Advisor Playback”.

Teletypewriter (TTY) Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

Deactivated OnStar® Accounts

In the event a customer has not renewed their OnStar® account after expiration or the account was never activated, OnStar® will make a discrete cellular call to the vehicle to deactivate the OnStar® system. Before taking this action, customers are notified that the OnStar® system in their vehicle will be deactivated unless they elect to renew the account. After the OnStar® account has been deactivated, customers will experience the following:

- The OnStar® status LED will not illuminate.
- The OnStar® system will NOT attempt to connect to the OnStar® Call Center in the event of a collision or if the vehicle's front air bags deploy for any other reason.
- An emergency button press will play a demo message indicating the service has been deactivated.
- An OnStar® Call Center button press will connect the customer with a dedicated sales team who can sell an OnStar® subscription and reactivate the vehicle. Depending on the type of OnStar® hardware in the vehicle,

the customer may first hear a demonstration message stating there is no current OnStar® subscription for the vehicle, and directing the customer what to do to activate services.

- OnStar® personal calling will not be available, as this feature requires the customer to have a current OnStar® account. Attempts to use this feature may result in cellular connection failure messages and the inability to connect to the number dialed.

Certain vehicles that have never had an active OnStar® account, or that have been deactivated, may be unable to establish a connection with the OnStar® Call Center. When normal published diagnostic procedures do not indicate a possible cause for the no connect concern, the vehicle may have been deactivated. For deactivated vehicles, a no connect response should be considered normal operation. Further diagnosis and subsequent repair is only necessary should the customer elect to become an active OnStar® subscriber or renew the account subscription.

OnStar® Cellular, GPS, and Diagnostic Limitations

The proper operation of the OnStar® System is dependent on several elements outside the components integrated into the vehicle. These include the National Cellular Network Infrastructure, the cellular telephone carriers within the network, and the GPS.

The cellular operation of the OnStar® system may be inhibited by factors such as the users range from an analog or digital cellular tower, the state of the cellular carrier’s equipment, and the location where the call is placed. Making an OnStar® key press in areas that lack sufficient cellular coverage or have a temporary equipment failure will result in either the inability of a call to complete with a data transfer or the complete inability to connect to the OnStar® Call Center. The OnStar® system may also experience connection issues if the identification numbers for the module, station identification number, electronic serial number or manufacturers electronic ID, are not recognized by the cellular carriers local signal receiving towers.

The satellites that orbit earth providing the OnStar system with GPS data have almost no failures associated with them. In the event of a no GPS concern, the failure will likely lie with the inability of the system to gain GPS signals because of its location, i.e. in a parking structure, hardware failure, or being mistaken with an OnStar® call which has reached the Call Center without vehicle data.

During diagnostic testing of the OnStar® system, the technician should ensure the vehicle is located in an area that has a clear unobstructed view of the open sky, and preferably, an area where analog or digital cellular calls have been successfully placed. These areas can be found by successfully making an OnStar® keypress in a known good OnStar® equipped vehicle and confirming success with the OnStar® Call Center advisor. Such places can be used as a permanent reference for future OnStar® testing.

Mobile Identification Number and Mobile Directory Number

The telematics communication interface control module utilizes 2 numbers for cellular device identification, call routing and connection, a mobile identification number and a mobile directory number. The mobile identification number represents the number used by the cellular carrier for call routing purposes while the mobile directory number represents the number dialed to reach the cellular device.

Operation of the OnStar® Speech Recognition Systems

OnStar® users communicate with 2 speech recognition systems. Speech recognition allows the user to speak to one computer in the vehicle, and one reached over a phone line. The computer tries to understand the users command, and responds by speaking back, or by taking the appropriate action, e.g. dialing the phone.

- Personal Calling uses a speech recognition system that resides in the vehicle. When the user presses the phone button, the system states, Ready, and listens for the user's command. The user can speak commands to control the hands-free phone.
- Virtual advisor is a remote speech recognition system that the caller can access by making a phone call. The user connects to virtual advisor by requesting it during personal calling use. The user is then transferred to the virtual advisor server and talks to it via a cellular connection.

The OnStar® speech recognition systems use speech technology that is designed to understand a wide range of American English speakers. Although there is no one right way to speak English, the system will work best when users try to modify their pronunciation should they encounter difficulty. Users who do not obtain good results are advised to try the tips and workarounds found in the Infotainment System Manual or the Owners Manual.

OnStar Description and Operation (UI3)

The Emergency Road Assistance Global Navigation Satellite System (ERA GLONASS) consists of the following components:

- Telematics communication interface control module
- Telematics two button assembly
- Microphone
- Cellular antenna
- GPS antenna
- Back up battery
- Backup speaker

This system also interfaces with the factory installed vehicle audio system.

Telematics Communication Interface Control Module

The ERA Glonass system uses Global System for Mobile Communication (GSM) to communicate data and voice signals over the national cellular network. The module is capable of up to 3G speeds and houses 2 technology systems, one to process Global Positioning System (GPS/Glonass) data, and another for cellular information.

The telematics communication interface control module has two antenna inputs, a cellular signal and a GPS/Glonass signal. The ERA Glonass system uses the Global Navigation Satellite System (GNSS), which is a combination of Unitied States Global Positioning System (GPS) signals and Russian Glonass satellite system. GPS/Glonass signals are used to provide location on demand.

Dedicated circuits are used to connect the telematics communication interface control module to a microphone, button assembly, radio, backup speaker and Back Up Battery (BUB). The telematics communication interface control module communicates with the rest of the vehicle over the single wired low speed CAN bus. Power is provided by a dedicated, fused B+ circuit. Ground is provided through the vehicle wiring harness attached to the module. The power mode state is determined by the telematics communication interface control module through serial data messaging.

ERA Glonass Two Button Assembly

The two button assembly may be part of the rear view mirror, or a separate, stand alone unit. The button assembly is comprised of 2 buttons and one status LED. The buttons are defined as follows:

- The “SOS” button, when pressed allows the user to start a manual emergency call.
- The TEST button, which has two functions. First it allows the user to cancel an emergency call before the call has been established with the call center. Second, if pressed longer than 4 seconds allows the user to enter the system test mode.

When pressed, each button completes a circuit across a resistor allowing a specific voltage to be returned to the telematics communication interface control module on the keypad signal circuit. Depending on the voltage range returned the module is able to identify which button has been pressed.

The status LED is located near the buttons on the button assembly. The LED is green when the system is ON and operating normally. When the LED is red, this indicates a system malfunction is present. When the LED is illuminated and flashing, it is an indication that a call is in progress. In the event there is a malfunction and the system is still able to make a call, the LED will flash red during the call however, the call functionally might be limited related to the issue that is present. During night mode the module provides a PWM signal to dim the brightness of the LED.

When the “SOS” button is pressed the LED will start blinking green and a voice prompt will instruct the customer to either press the “SOS” button again to continue with the emergency call, or press the “TEST” button to cancel. If the user does not press either of the buttons in a certain amount of time the module will go back into standby mode and inform the customer via a voice prompt.

In the case of a callback from the call center the LED will be solid red or green. A solid red LED indicates an emergency call related DTC has been set by the telematics communication interface control module, otherwise the LED will be solid green.

After a call to the call center the module will stay in callback mode for 20 minutes with the ignition ON of OFF and the LED will be on solid during this time. After 20 minutes there will be a voice prompt and the LED will turn off. After that the module will stay registered to the network for an additional 100 minutes.

ERA Glonass Test Mode

After entering Test Mode the telematics communication interface control module will test the functionally of the keypad, LED indicator, microphone, and audio. At the end of Test Mode the module will send a Minimum Set of Data (MSD) message to the call center.

The MSD message contains control data, vehicle information, direction, position and time. When an emergency call is connected to the call center the MSD message is sent by in-band transmission by default. In the event in-band transmission is unsuccessful, Short Message Service (SMS) will be used as a backup.

To enter the Test Mode turn ignition ON and make sure the vehicle has not moved for at least 1 minute, then press and hold the TEST button for longer than 4 seconds. A series of voice prompts will instruct the user to perform certain functions. At the end of Test Mode one of two messages will be played, TEST OK or Emergency Call System Test Indicates a Failure.

Microphone

The microphone is located in the headliner or roof console. The telematics communication interface control module supplies approximately 10V to the microphone on the microphone signal circuit. The microphone modifies the 10V depending on the volume and voice being detected. A microphone low reference circuit or a drain wire provides a ground for the microphone. The microphone signal circuits pass through the telematics communication interface control module to support entertainment voice recognition. Thus, the module uses the same microphone as the infotainment system. In the event the infotainment system uses two microphones only one will pass through the telematics communication interface control module.

Cellular and GPS/Glonass Antennas

The antenna will have any of the following functions when equipped with ERA Glonass:

- Input cellular element
- Output cellular element
- GPS/Glonass element

The ERA Glonass system uses the input and output cellular antenna elements to send and receive cellular data. The cellular signal is carried by a coax cable that connects the antenna directly to the telematics communication interface control module.

The GPS/Glonass antenna element is used to collect the signals of the orbiting satellites. The GPS/Glonass signal is carried by a coax cable that connects directly to the telematics communication interface control module.

Back-up Battery

Note: Do not disconnect the main vehicle battery or remove the telematics fuse with the ignition key in any position other than OFF. Disconnecting power to the telematics communication interface control module in any way while the ignition is ON or with retained accessory power activated may cause activation of the Back-Up Battery. This action is per design as the back-up battery is designed to provide power to the telematics communication interface control module so an emergency notification call can be made after an event where the main battery is disabled or unable to supply sufficient voltage to drive the module. The telematics communication interface control module naturally chooses the main supply voltage as it’s default supply. If an emergency call is active, or the network de-registration timer has not expired, and the main supply is removed or lost for any reason the module will use the Back-Up Battery as a power supply to continue the emergency call as long as the default supply can not be detected . If the module is in standby mode and the vehicle battery is disconnected the module will switch to the backup battery for three seconds. If there is no collision event or emergency button press within the three seconds the module will switch off to prevent damage to the backup battery. The back-up battery is not rechargeable and must be replaced if the diagnostics for the DTC (Replace Backup Power Source) indicate it is needed.

Audio System Interface

In the case of an emergency call the radio is muted and the telematics communication interface control module will use the external backup speaker which is connected directly to the module.

ERA Glonass Limitations

The proper operation of the ERA Glonass system is dependent on several elements outside the components integrated into the vehicle. These include the National Cellular Network Infrastructure and the GPS/Glonass.

Making an SOS key press in areas that lack sufficient cellular coverage or have a temporary equipment failure will result in either the inability of a call to complete with a data transfer or the complete inability to connect to the Call Center. In this case the module will uses backup mechanism to store the MSD message into history. When the module succeeds in connecting to the network the stored MSD message will be sent to the call center.

Radio/Audio System Description and Operation (IO3)

The entertainment system on this vehicle may have several different configurations available to it. To determine the specific configuration of the vehicle, please see the Service Parts ID Label, and refer to RPO Code List.

Each item in the list below represents topics covered in detail below.

- Data Communications
- Remote Radio Receiver
- Media Disc Player
- Audio Amplifier (If equipped)
- Speaker Operation
- Infotainment Controls and Display
- Antenna System
- Radio Reception
- Theft Deterrent
- Auxiliary Audio Input Jack
- USB Port and SD Card Reader
- Valet Mode
- OnStar ®
- Steering Wheel Controls (If equipped)
- Auto Volume Control

Data Communications

The infotainment system communicates with other devices on multiple serial data networks during operation. The infotainment system utilizes the Media Oriented Systems Transport (MOST) bus, Local Interconnect Network (LIN) and GMLAN to establish communications. For additional information refer to Data Link Communications Description and Operation

Remote Radio Receiver

The radio is the MOST BUS master. The radio also communicates with other components and systems within the vehicle via GMLAN.

The remote radio receiver is responsible for receiving all broadcast audio bands. Broadcast signals from AM, FM, and XM bands are transmitted to the radio via the vehicle antenna systems.

Radio Power

The radio receives battery power and ground from the vehicle harness.

The radio does not use a discrete ignition feed circuit for power moding. The power mode master provides the system power mode to the radio via serial data messages. The power mode master determines the system power mode by processing power mode information from ignition switch inputs. Serial data power modes supported by the radio are OFF, ACCESSORY, RUN, and CRANK REQUEST.

Radio Audio Outputs

When not equipped with an amplifier, the radio outputs all audio signals to the speakers via the vehicle wiring harness.

When equipped with an amplifier, the radio outputs all audio signals digitally over the MOST bus.

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system.

The media disc player receives control information and outputs digital audio over the MOST bus.

The media disc player receives battery power and ground from the vehicle harness.

Audio Amplifier (If equipped)

Amplifier Interface

A fused battery voltage circuit provides the main amplifier power. The audio amplifier is a participant on the MOST network. The audio amplifier receives audio signals and control information from the MOST bus. The audio amplifier also communicates with other components and systems within the vehicle via GMLAN.

Amplifier Operation

The purpose of the amplifier is to increase the power of a voltage or current signal. The output signal of an amplifier may consist of the same frequencies as the input signal or it may consist of only a portion of the frequencies as in the case of a subwoofer or midrange speaker. The audio amplifier amplifies the signal and sends it to the appropriate speakers.

Each of the audio output channel circuits (+) and (−), at the audio amplifier have a DC bias voltage that is approximately one half of the battery voltage. When using a DMM, each of the audio output channel circuits will measure approximately 6.5V DC. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

The audio amplifier is also responsible for operation of active noise cancellation. Refer to CELL Link Error - Link target cell (cell ID 194567) is invalid for this publication. for more information.

Speaker Operation

Speakers turn electrical energy into mechanical energy to move air, using a permanent magnet and an electromagnet. The electromagnet is energized when the radio or amplifier (if equipped) delivers current to the voice coil on the speaker. The voice coil will form a north and south pole that will cause the voice coil and the speaker cone to move in relation to the permanent magnet. The current delivered to the speaker is rapidly changing alternating current (A/C). This causes the speaker cone to move in two directions producing sound.

Infotainment Controls and Display

The infotainment display and controls are a separate component from the radio, combined into an assembly. The assembly contains the control knobs and buttons for all audio and HVAC functions and the information display. The assembly is supplied battery voltage and ground from the vehicle harness.

The radio communicates with the assembly via a LIN serial data circuit. Messages communicated include the following:

- Wake-up/power state messages
- Diagnostic information
- Button presses/knob rotations
- Commands for the state of indicators
- Back-lighting dimming level

The radio sends the display digital video data for on-screen display through a dedicated video cable.

HVAC data for controls and status indicators is communicated between the HVAC controls and the HVAC control module with a separate LIN serial data circuit. HVAC status screen information from the HVAC control module is transmitted to the radio on the GMLAN serial data circuit.

Antenna System

Active Antenna

The active antenna system uses an integral antenna applied as an appliqué to the rear glass. The antenna amplifier receives both AM and FM signals from the rear glass antenna. The antenna is part of the rear window and looks similar to the defogger grid. One antenna receives AM signals while the other antenna receives FM signals. Any damage to the antenna requires replacing the glass.

The radio antenna amplifier is enabled when the radio is turned on. The radio provides battery voltage to the antenna amplifier using the center conductor of the antenna coaxial cable. When a 12 V signal is seen by the amplifier on the center conductor of the antenna coax, the received signals are amplified.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna may be used with the AM/FM radio, but is primarily for cellular, GPS signals, and XM signals, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear reception. If the vehicle has a sunroof, the performance of the system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the system, ensure the multi-band antenna is not obstructed.

Radio Reception

AM/FM Radio Signal

The radio signal is sent from a broadcast station and is then received by an antenna. The strength of the signal received depends on the following:

- The power output (wattage) of the broadcasting station
- The location of the vehicle (or receiver) relative to the broadcast tower.
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Atmospheric conditions
- What band (AM or FM) the station is broadcasting
- Type of antenna and the ground plane

Digital Radio Receiver (If equipped)

The XM satellite receiver is integrated into the radio. XM satellite radio provides digital radio reception. The XM signal is broadcast from two satellites and, where necessary, terrestrial repeaters. The high power satellites allow the antenna to receive the XM signal even when foliage and other partial obstructions block the antennas view of the satellite. Terrestrial repeaters are used in dense urban areas. These repeaters will receive the satellite signal and re-broadcast them at much higher power levels in order to ensure reception in areas with densely packed tall buildings. A service fee is required in order to receive the XM service.

Radio Data System (RDS)

The RDS feature is available only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. RDS data is carried in what is known as a "subcarrier". A subcarrier is a frequency that the FM broadcaster is authorized to use to send data that is not audible in the main audio program.

RDS functions will only work with FM broadcast stations that are broadcasting RDS data. Not all FM Broadcast stations broadcast RDS data or offer all of the RDS services.

The information displayed is dependent upon the information broadcast by the particular station. The information may vary greatly between stations. RDS functions may not work properly when reception is weak, reception is of poor quality, or RDS is not implemented properly by the FM Broadcaster. In some cases, a radio station broadcasting incorrect information may cause the RDS features of the radio to appear to work improperly.

With RDS, the radio can do the following:

- Display text information such as: station identification, type of programming, and general information (artist and song title, station messages, call in phone numbers, etc.).
- Seek to stations broadcasting the selected type of programming
- Receive announcements concerning local and national emergencies

- Receive alert warnings of local or national emergencies. When an alert announcement comes on the current radio station, ALERT! displays. You will hear the announcement, even if the volume is low or a CD is playing. If a CD is playing, play stops during the announcement. Alert announcements cannot be turned off. ALERT! is not affected by tests of the emergency broadcast system. This feature is not supported by all RDS stations.

Theft Deterrent

The radio theft deterrent system is intended to disable or limit radio functionality if incorrect vehicle information is received by the radio. The radio disables functionality if the VIN information received by the radio does not match the VIN information that has been learned by the radio. The radio receives this information via serial data. A possible cause of incorrect VIN info could be the radio was originally installed in another vehicle.

The radio has the following theft operating modes as part of the theft deterrent system:

- Normal Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data matches the learned VIN sequence. In this mode the radio has full functionality.
- No VIN Mode: The radio has not received or learned a correct VIN sequence. In this mode the radio has limited functionality.
- Theft Detected Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data does NOT match the learned VIN sequence. In this mode the radio may be disabled or have limited functionality. The radio display will indicate that theft protection is active.

Auxiliary Audio Input Jack (If equipped)

The infotainment system may have a 3.5mm (1/8 in.) auxiliary audio input jack located in the center console. The auxiliary audio input jack interfaces directly with the radio. When a portable audio playback device is connected to the auxiliary jack, an internal switch detects the connection and the radio will switch to AUX as the audio source. Audio signals from the device are sent to the radio from the auxiliary jack via the left, right, and common audio signal circuits.

- When a device is first connected to the 3.5mm (1/8 in.) input jack the infotainment system automatically switches to that device. If an auxiliary device has already been connected, press the AUX or CD/AUX button to select the device.
- Playback of an audio device that is connected to the 3.5mm jack can only be controlled using the controls on the device.
- The volume control on the device may need to be adjusted to ensure sufficient playback volume through the infotainment system.

USB Port and SD Card Reader (If equipped)

The infotainment system has a USB port and SD card reader slot located in the center console. The USB port and the card reader slot interface with a hub device, internal to the auxiliary jack, USB, and memory card receptacle assembly. The auxiliary jack, USB, and memory card receptacle assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing additional amperage to power USB devices.

The internal hub device interfaces directly with the radio via a standard USB cable. A Mini type USB connector is used to connect the cable at the USB port and at the radio and at the auxiliary jack, USB, and memory card receptacle. Standard USB male to female connections are typically used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

USB Port

The USB port allows connectivity to the infotainment system from portable media players or a USB storage device (memory stick/ flash drive). When a device is connected to the USB port, the system detects the device and switches to USB as the audio source. Once connected, the device can be controlled from the radio controls.

Not all portable media player devices or file types are compatible. Connection to USB HUB devices is not supported.

Refer to the owner’s manual for information on USB devices, control, and operation.

SD Card Reader

The infotainment system uses the SD card reader as a mass storage device, similar to a USB storage device.

Refer to the owners manual for information on media types supported via the SD card reader.

Valet Mode

Valet Mode is a customer enabled feature of the infotainment system, found in the settings menu, if equipped. The customer creates and inputs a four digit code using the infotainment controls. Confirming the code and selecting LOCK will lock the infotainment system, steering wheel controls and other vehicle features, dependant on vehicle equipment. The vehicle will remain in valet mode until the same four digit code is reentered.

In the event that the four digit code is forgotten, the scan tool can be used to clear the Valet Mode Code.

OnStar ® (If equipped)

When OnStar is activated, a serial data message is sent to the radio that activates a software program. When the software begins its process, the fade goes to the front, Bass and Treble are set to the mid range, the outputs are mono, and the audio source is OnStar. OnStar takes priority over any other audio source. All of these actions are preset values stored in the radio.

For additional OnStar information, refer to OnStar Description and Operation (UE1)OnStar Description and Operation (UI3).

Steering Wheel Controls (If equipped)

Some audio functions are available using the steering wheel controls. The steering wheel controls duplicate the function of the primary controls available on the radio.

For additional information on steering wheel controls, refer to Steering Wheel Controls Description and Operation.

Auto Volume Control

With auto volume control, the audio system will adjust automatically to make up for road and wind noise as you drive, by increasing the volume as vehicle speed increases. To use auto volume control, set the volume at the desired level, and then select either Low, Medium, or High. To turn auto volume control off, select the Off screen button.

Radio/Audio System Description and Operation (IO5/IO6)

The entertainment system on this vehicle may have several different configurations available to it. To determine the specific configuration of the vehicle, please see the Service Parts ID Label, and refer to RPO Code List.

Each item in the list below represents topics covered in detail below.

- Data Communications
- Remote Radio Receiver
- Human Machine Interface Module
- Media Disc Player
- Audio Amplifier (If equipped)
- Speaker Operation
- Infotainment Controls and Display
- Antenna System
- Radio Reception
- Theft Deterrent
- Bluetooth ® (if equipped)
- Applications (if equipped)
- Auxiliary Audio Input Jack
- USB Port and SD Card Reader
- Navigation System Components and Features (if equipped)
- Valet Mode
- OnStar ®
- Steering Wheel Controls (If equipped)
- Auto Volume Control

Data Communications

The infotainment system communicates with other devices on multiple serial data networks during operation. The infotainment system utilizes the Media Oriented Systems Transport (MOST) bus, Local Interconnect Network (LIN) and GMLAN to establish communications. For additional information refer to Data Link Communications Description and Operation

Remote Radio Receiver

The radio is the MOST BUS master. The radio also communicates with other components and systems within the vehicle via GMLAN.

The remote radio receiver is responsible for receiving all broadcast audio bands. Broadcast signals from AM, FM, and XM bands are transmitted to the radio via the vehicle antenna systems.

Radio Power

The radio receives battery power and ground from the vehicle harness.

The radio does not use a discrete ignition feed circuit for power moding. The power mode master provides the system power mode to the radio via serial data messages. The power mode master determines the system power mode by processing power mode information from ignition switch inputs. Serial data power modes supported by the radio are OFF, ACCESSORY, RUN, and CRANK REQUEST.

Radio Audio Outputs

When not equipped with an amplifier, the radio outputs all audio signals to the speakers via the vehicle wiring harness.

When equipped with an amplifier, the radio outputs all audio signals digitally over the MOST bus.

Human Machine Interface Module

The human machine interface module is responsible for the following: Video for the infotainment display, Bluetooth ®, USB, memory card reader, and speech recognition functions.

The human machine interface module communicates with the info display module via the LIN bus for control information, touch communications and dimming level. Digital video data is sent to the display through a dedicated video cable.

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system.

The media disc player receives control information and outputs digital audio over the MOST bus.

The media disc player receives battery power and ground from the vehicle harness.

Audio Amplifier (If equipped)

Amplifier Interface

The amplifier receives battery power and ground from the vehicle harness. . The audio amplifier is a participant on the MOST network. The audio amplifier receives audio signals and control information from the MOST bus.

Amplifier Operation

The purpose of the amplifier is to increase the power of a voltage or current signal. The output signal of an amplifier may consist of the same frequencies as the input signal or it may consist of only a portion of the frequencies as in the case of a subwoofer or midrange speaker. The audio amplifier amplifies the signal and sends it to the appropriate speakers.

Each of the audio output channel circuits (+) and (−), at the audio amplifier have a DC bias voltage that is approximately one half of the battery voltage. When using a DMM, each of the audio output channel circuits will measure approximately 6.5V DC. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

The audio amplifier is also responsible for operation of active noise cancellation. Refer to CELL Link Error - Link target cell (cell ID 194567) is invalid for this publication. for more information.

Speaker Operation

Speakers turn electrical energy into mechanical energy to move air, using a permanent magnet and an electromagnet. The electromagnet is energized when the radio or amplifier (if equipped) delivers current to the voice coil on the speaker. The voice coil will form a north and south pole that will cause the voice coil and the speaker cone to move in relation to the permanent magnet. The current delivered to the speaker is rapidly changing alternating current (A/C). This causes the speaker cone to move in two directions producing sound.

Infotainment Controls and Display

The infotainment display and controls are a separate component from the radio, combined into an assembly. The assembly contains the control knobs and buttons for all audio and HVAC functions and the information display. The assembly is supplied battery voltage and ground from the vehicle harness.

Control information, touch communications and dimming level for the display are communicated via a LIN serial data circuit to the human machine interface module.

The human machine interface module sends the display digital video data for on-screen display through a dedicated video cable.

The information display provides a feedback on the touch screen and certain controls. Buttons pulse when pressed to affirm that the command is being carried out,

When not actively in use, the screen reverts to minimal images. Proximity Sensing awakens the LCD screen when a hand approaches it.

The controls communicate via a LIN serial data circuit with the remote radio receiver . Messages communicated include the following:

- Wake-up/power state messages
- Diagnostic information
- Button presses/knob rotations
- Commands for the state of indicators
- Back-lighting dimming level

HVAC data for controls and status indicators is communicated between the HVAC controls and the HVAC control module with a separate LIN serial data circuit. HVAC status screen information from the HVAC control module is transmitted to the radio on the GMLAN serial data circuit. The radio communicates the desired screen information to the human machine interface module to be sent to the information display using the video data circuits.

Antenna System

Active Antenna

The active antenna system uses an integral antenna applied as an appliqué to the rear glass. The antenna amplifier receives both AM and FM signals from the rear glass antenna. The antenna is part of the rear window and looks similar to the defogger grid. One antenna receives AM signals while the other antenna receives FM signals. Any damage to the antenna requires replacing the glass.

The radio antenna amplifier is enabled when the radio is turned on. The radio provides battery voltage to the antenna amplifier using the center conductor of the antenna coaxial cable. When a 12 V signal is seen by the amplifier on the center conductor of the antenna coax, the received signals are amplified.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This type of antenna may be used with the AM/FM radio, but is primarily for cellular, GPS signals, and XM signals, if the vehicle has these features. Keep this antenna clear of snow and ice build up for clear reception. If the vehicle has a sunroof, the performance of the system may be affected if the sunroof is open. Loading items onto the roof of the vehicle can interfere with the performance of the system, ensure the multi-band antenna is not obstructed.

Radio Reception

AM/FM Radio Signal

The radio signal is sent from a broadcast station and is then received by an antenna. The strength of the signal received depends on the following:

- The power output (wattage) of the broadcasting station
- The location of the vehicle (or receiver) relative to the broadcast tower.
- Height of the broadcast antenna
- Height of the receiving antenna
- Obstacles between the tower and the receiver
- Atmospheric conditions
- What band (AM or FM) the station is broadcasting
- Type of antenna and the ground plane

Digital Radio Receiver (If equipped)

The XM satellite receiver is integrated into the radio. XM satellite radio provides digital radio reception. The XM signal is broadcast from two satellites and, where necessary, terrestrial repeaters. The high power satellites allow the antenna to receive the XM signal even when foliage and other partial obstructions block the antennas view of the satellite. Terrestrial repeaters are used in dense urban areas. These repeaters will receive the satellite signal and re-broadcast them at much higher power levels in order to ensure reception in areas with densely packed tall buildings. A service fee is required in order to receive the XM service.

Radio Data System (RDS)

The RDS feature is available only on FM stations that broadcast RDS information. This system relies upon receiving specific information from these stations and only works when the information is available. While the radio is tuned to an FM-RDS station, the station name or call letters display. RDS data is carried in what is known as a "subcarrier". A subcarrier is a frequency that the FM broadcaster is authorized to use to send data that is not audible in the main audio program.

RDS functions will only work with FM broadcast stations that are broadcasting RDS data. Not all FM Broadcast stations broadcast RDS data or offer all of the RDS services.

The information displayed is dependent upon the information broadcast by the particular station. The information may vary greatly between stations. RDS functions may not work properly when reception is weak, reception is of poor quality, or RDS is not implemented properly by the FM Broadcaster. In some cases, a radio station broadcasting incorrect information may cause the RDS features of the radio to appear to work improperly.

With RDS, the radio can do the following:

- Display text information such as: station identification, type of programming, and general information (artist and song title, station messages, call in phone numbers, etc.).
- Seek to stations broadcasting the selected type of programming
- Receive announcements concerning local and national emergencies
- Receive alert warnings of local or national emergencies. When an alert announcement comes on the current radio station, ALERT! displays. You will hear the announcement, even if the volume is low or a CD is playing. If a CD is playing, play stops during the announcement. Alert announcements cannot be turned off. ALERT! is not affected by tests of the emergency broadcast system. This feature is not supported by all RDS stations.

Theft Deterrent

The radio theft deterrent system is intended to disable or limit radio functionality if incorrect vehicle information is received by the radio. The radio disables functionality if the VIN information received by the radio does not match the VIN information that has been learned by the radio. The radio receives this information via serial data. A possible cause of incorrect VIN info could be the radio was originally installed in another vehicle.

The radio has the following theft operating modes as part of the theft deterrent system:

- Normal Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data matches the learned VIN sequence. In this mode the radio has full functionality.
- No VIN Mode: The radio has not received or learned a correct VIN sequence. In this mode the radio has limited functionality.
- Theft Detected Mode: The radio has learned a correct VIN sequence and the VIN information received via serial data does NOT match the learned VIN sequence. In this mode the radio may be disabled or have limited functionality. The radio display will indicate that theft protection is active.

Bluetooth ® (If equipped)

Bluetooth ® wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security. The operating range of the signal is approximately 30 feet.

The available features and functions are determined by the type of device and the software within the devices being used. For a feature or function to operate, it must be supported in both devices.

The first connection between devices is established through a process called pairing. In order to pair two devices, a password (passkey) has to be exchanged between the two devices. One device will generate the password, the other device accepts the password to complete the process. Once the devices are paired, future connections between the devices will occur automatically when the devices are on and within range of each other.

The Bluetooth ® hardware is internal to the human machine interface module. The human machine interface module supports streaming of data (music, voice, information) from cellular phones and other mobile devices that support those features. The human machine interface module is also capable of interfacing with cellular phones for hands-free features.

- The device must be paired to the system to use the available Bluetooth ® feature(s). The pairing process must only be performed once for each device, unless that device’s information is deleted.
- Up to five devices can be paired, but only one can be connected at any given time.
- Streaming Audio allows playing music from the mobile device wirelessly. Music stored on the mobile device can be viewed and controlled from the display.
- To stream audio from a mobile device, the device must be unlocked, and any additional applications should be closed.

Refer to the vehicle owners manual, supplements, and the device manufacturers information for pairing instructions.

Applications (If equipped)

When the system is equipped with Bluetooth ®, the system is capable of using applications, commonly referred to as apps.

The term application refers to any piece of software that works on a system (hardware) that is being operated by it’s own software. Applications are typically small software programs which uses the hardware to perform a specific task, as opposed to operating the entire system.

- For an application to be used, it must be installed on both the vehicle infotainment system and a compatible mobile device.
- The device must be connected to the system. this may be done wirelessly via Bluetooth ®, or via the vehicle USB port. Refer to the device manufacturers information for the proper connection method.
- When the device is connected, the vehicle infotainment system is used to remotely access and control the application on the mobile device.
- The application must work correctly on the device to work with the vehicle infotainment system.
- The user may be required to log-in to the application on the mobile device before using the application from the vehicle controls.
- Using applications will use the device’s data plan.
- The device must be unlocked, and any additional applications should be closed.

Refer to the owner’s manual and supplements for information on mobile devices, control, and operation.

Auxiliary Audio Input Jack (If equipped)

The infotainment system may have a 3.5mm (1/8 in.) auxiliary audio input jack located in the center console. The auxiliary audio input jack interfaces directly with the radio. When a portable audio playback device is connected to the auxiliary jack, an internal switch detects the connection and the radio will switch to AUX as the audio source. Audio signals from the device are sent to the radio from the auxiliary jack via the left, right, and common audio signal circuits.

- When a device is first connected to the 3.5mm (1/8 in.) input jack the infotainment system automatically switches to that device. If an auxiliary device has already been connected, press the AUX or CD/AUX button to select the device.
- Playback of an audio device that is connected to the 3.5mm jack can only be controlled using the controls on the device.
- The volume control on the device may need to be adjusted to ensure sufficient playback volume through the infotainment system.

USB Port and SD Card Reader (If equipped)

The USB port and the card reader slot interface with a hub device, internal to the auxiliary jack, USB, and memory card receptacle assembly. The auxiliary jack, USB, and memory card receptacle assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing additional amperage to power USB devices.

The internal hub device interfaces directly with the human machine interface module via a standard USB cable. A Mini type USB connector is used to connect the cable at the USB port and at the human machine interface module and at the auxiliary jack, USB, and memory card receptacle. Standard USB male to female connections are typically used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

USB Port

The USB port allows connectivity to the infotainment system from portable media players or a USB storage device (memory stick/ flash drive). When a device is connected to the USB port, the system detects the device and switches to USB as the audio source. Once connected, the device can be controlled from the radio controls.

Not all portable media player devices or file types are compatible. Connection to USB HUB devices is not supported.

Refer to the owner’s manual for information on USB devices, control, and operation.

SD Card Reader

The infotainment system uses the SD card reader as a mass storage device, similar to a USB storage device.

Refer to the owners manual for information on media types supported via the SD card reader.

Navigation System Components and Features (if equipped)

The human machine interface module provides navigation functionality, if equipped. The human machine interface module provides the following:

- Connection to the global positioning system (GPS) antenna, which provides the vehicle position information.
- Map data for navigation and map route guidance, stored in the human machine interface modules internal memory.
- Route guidance with verbal prompts to the operator.
- Traffic and weather information for display on the navigation system map (with active subscription, where available).

Global Positioning System (GPS) Antenna

The global positioning system (GPS) antenna is part of the multi-band antenna located on the roof of the vehicle. The GPS antenna is used to collect the signals of the orbiting GPS satellites. Within the antenna is housed a low noise amplifier that allows for a more broad and precise reception of this data. The GPS antenna amplifier is powered through the coaxial cable.

The antenna is connected to the human machine interface module directly, or through a signal splitter. The signal splitter is a component for dividing the navigation signal into two paths without any transmission loss. This allows the use of a single GPS antenna to provide a signal to both the human machine interface module and the telematics communication interface module.

Route Guidance

The map will display the route to the selected destination. Voice prompts alert the operator of upcoming events (turns) and arrivals at the destination. The navigation system will automatically recalculate if the route is not followed. The human machine interface module uses data received from the global positioning system (GPS) satellites, the vehicle speed signal. and serial data information to accurately display the current position of the vehicle.

Points of Interest

The map database provides point of interest information. Points of interests are locations that are frequently visited. Points of interest can be can be displayed on the map or set as a destination. The following are some of the available Points of interests:

- Gas Station
- Restaurant
- College
- Police Station

Valet Mode

Valet Mode is a customer enabled feature of the infotainment system, found in the settings menu, if equipped. The customer creates and inputs a four digit code using the infotainment controls. Confirming the code and selecting LOCK will lock the infotainment system, steering wheel controls and other vehicle features, dependant on vehicle equipment. The vehicle will remain in valet mode until the same four digit code is reentered.

In the event that the four digit code is forgotten, the scan tool can be used to clear the Valet Mode Code.

OnStar ® (If equipped)

When OnStar is activated, a serial data message is sent to the radio that activates a software program. When the software begins its process, the fade goes to the front, Bass and Treble are set to the mid range, the outputs are mono, and the audio source is OnStar. OnStar takes priority over any other audio source. All of these actions are preset values stored in the radio.

For additional OnStar information, refer to OnStar Description and Operation (UE1)OnStar Description and Operation (UI3).

Steering Wheel Controls (If equipped)

Some audio functions are available using the steering wheel controls. The steering wheel controls duplicate the function of the primary controls available on the radio.

For additional information on steering wheel controls, refer to Steering Wheel Controls Description and Operation.

Auto Volume Control

With auto volume control, the audio system will adjust automatically to make up for road and wind noise as you drive, by increasing the volume as vehicle speed increases. To use auto volume control, set the volume at the desired level, and then select either Low, Medium, or High. To turn auto volume control off, select the Off screen button.

Video Entertainment System Description and Operation

Each item in the list below represents topics covered below:

- Rear Seat Entertainment System Components
- Media Disc Player
- Video Display Screens
- Remote Control
- Wireless Headphones
- Wired Headphone Jack
- Auxiliary Inputs

Rear Seat Entertainment System Components

The rear seat entertainment system includes:

- The disc player for playing optical media.
- One or two overhead video display screens
- An infrared module located in the rear video display(s)
- Two sets of wireless infrared headphones
- A wireless infrared remote control
- An auxiliary input assembly

Media Disc Player

The media disc player is responsible for playing optical media for the infotainment system, refer to the Owners Manual for supported media types.

The media disc player is a separate component from the radio. The media disc player receives power, ground and serial data from the vehicle harness. The media disc player receives control information and outputs audio to the infotainment system over the MOST bus. The media disc player provides a discrete circuit to control the power state of the rear displays.

The media disc player is also the control module for the rear seat entertainment system, responsible for video output, infrared audio, screen controls and source selections for the system. All information to the video screen is communicated over the LVDS cable. One cable is connected to the front display, and a second cable is connected to the rear display.

Video Display Screens

Front Display

When the vehicle is in PARK, the front display is capable of showing video sourced from the media disc player. Information is transmitted to the display from the media disc player via the blue LVDS cable. On screen controls are available to provide the operator with playback controls and other options.

Rear Display

The 2nd row overhead display is located in the headliner. The display screen shows video from the media disc player, or an AUX input device.

The display receives power and ground from the vehicle harness. A discrete control circuit from the media disc player is used to control the power state of the display. The display receives all other video, audio, and control information via the LVDS cable.

The display contains the infrared transmitters for the wireless headphones and the remote control. During operation, the infrared transmitters may be visible as illuminated LEDs.

Rear Displays with DNU

When equipped with RPO DNU, a 3rd row overhead display is added to the system.

The overhead displays receive power and ground from the vehicle harness. A discrete control circuit from the media disc player is used to control the power state of the displays. The displays receive all other video, audio, and control information via the LVDS cable.

The 2nd row display contains the infrared transmitters for the wireless headphones. During operation, the infrared transmitters may be visible as illuminated LEDs. The LEDs are not on visible on the 3rd row display. Both displays contain an infrared receiver for the remote control.

Remote Control

The wireless remote control is used to operate the system from the rear seat. Infrared signals from the remote control are received by the infrared receivers in display. The remote control can be used to turn the rear screen on or off, to change system settings, and to select the source for the screen from the media available to the infotainment system. Refer to the Owners Manual for additional information on remote control functions.

Direct sunlight or very bright light may affect the ability of the infrared receivers to respond to signals from the remote control. Objects blocking the line of sight may also affect the function of the remote control.

Wireless Headphones

Wireless headphones allow for rear seat passengers to listen to an audio source without disturbing the listening of front seat passengers. The wireless headphones receive audio signals from the infrared transmitter in the display. This transmission is line of sight only, so audio quality may be degraded if anything blocks the transmitter signal from reaching the headphones.

A power button on the headphone is used to turn the headphone on. A red LED illuminates when the headphone is turned ON. The headphones automatically turn OFF if they lose the infrared signal from the system for approximately 4 minutes in order to preserve their battery power. The signal may be lost if the system is turned off or if the headphones are out of range of the infrared signal transmitters.

Each set of headphones has a rotary volume control on one of the earpieces. To adjust the volume, adjust this control.

Audio to the wireless headphones is provided over 2 channels. Audio for channel 1 or channel 2 is selected from one of the available sources using the remote control. Pressing the button in the center of the headphone volume control will switch the headphone between channels.

Auxiliary Inputs

The rear seat entertainment system has an auxiliary input assembly that contains a USB port, an SD card reader, RCA type audio/video jacks, and a wired headphone jack with volume control. Refer to the Owners Manual for information on compatible devices and supported media types/formats.

USB port and SD Card Reader

The USB port and SD card reader slot interface with a hub device, internal to the assembly. The assembly receives fused battery voltage and ground from the harness to power the internal hub device as well as providing additional amperage to power USB devices.

The internal hub device interfaces directly with the media disc player via a standard USB cable. A Mini type USB connector is used to connect the cable at the media disc player and the auxiliary input assembly. Mini type USB male to female connections are used for connecting USB cables together where an in-line connection is required. An in-line cable connection is typically found between the console and I/P harness.

The USB port allows connectivity to the rear seat entertainment system from portable media players or a USB storage device (memory stick/ flash drive). The rear seat entertainment uses the SD card reader as a mass storage device, similar to a USB storage device.

Once a supported device is connected to the USB port or SD card reader, the device may be sourced to one or both of the rear displays using the remote control.

Video

The local video input is the standard yellow RCA color-coded jacks. A composite video signal from a device can be attached to this input and is then available to be sourced to one or both of the rear screens. To use this video input, connect the auxiliary device cables to the RCA jacks and power ON both the auxiliary device and the rear seat entertainment system.

Power for the device is not supplied by this connection. The rear seat entertainment system cannot control the operation of devices connected to the RCA jacks. All operation of the device must be done using the controls available on the device.

Wired Headphone Jack

The wired headphone jack is used to connect an additional set of headphones to the system. Audio for the wired headphone jack can be from either the left or the right screen source, and is selected using the remote control.

Audio to the wired headphone jack is transmitted through the vehicle harness from the media disc player. A rotary control near the headphone jack is used to adjust the volume.

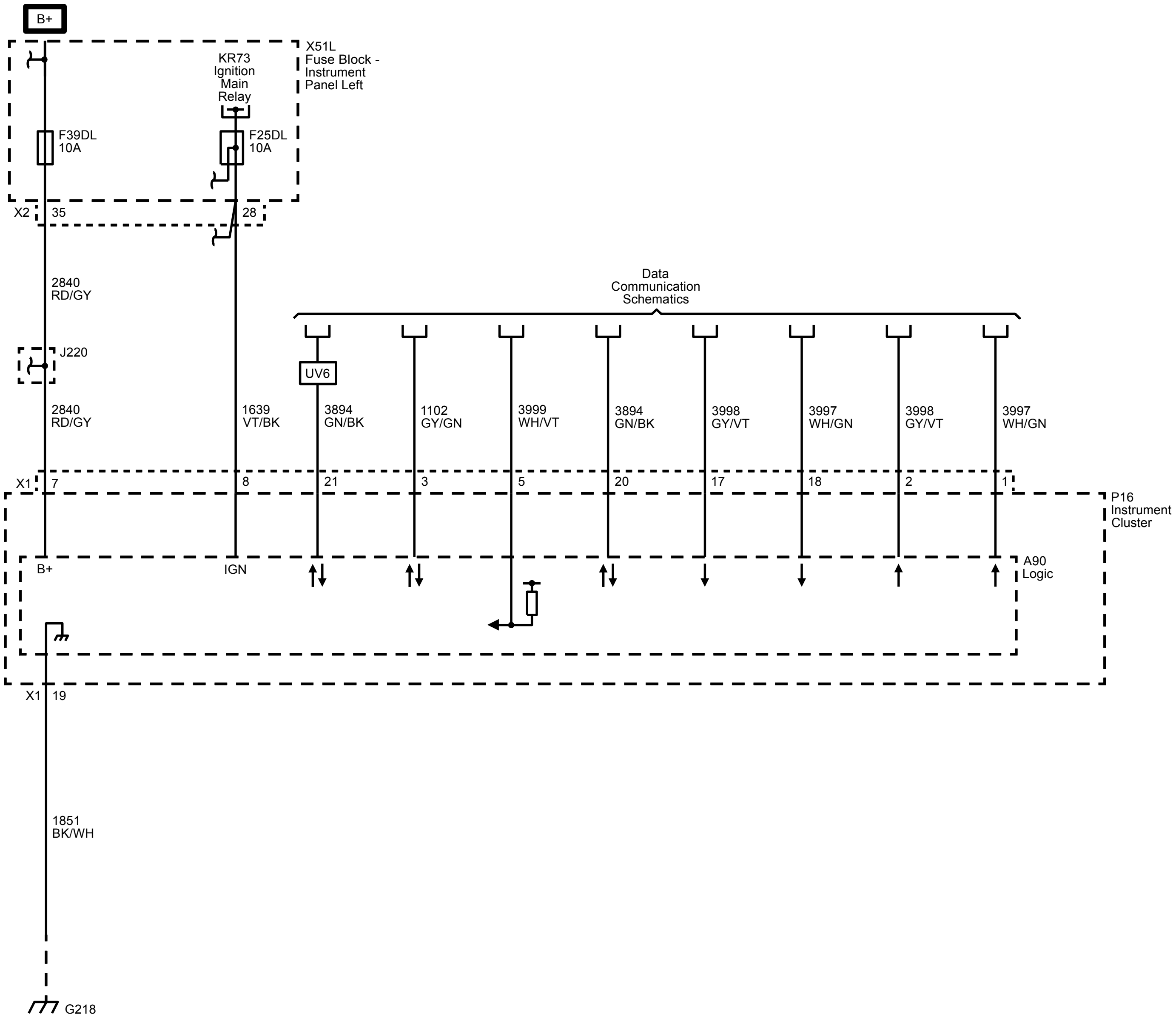
Driver Information and Entertainment

Displays and Gauges

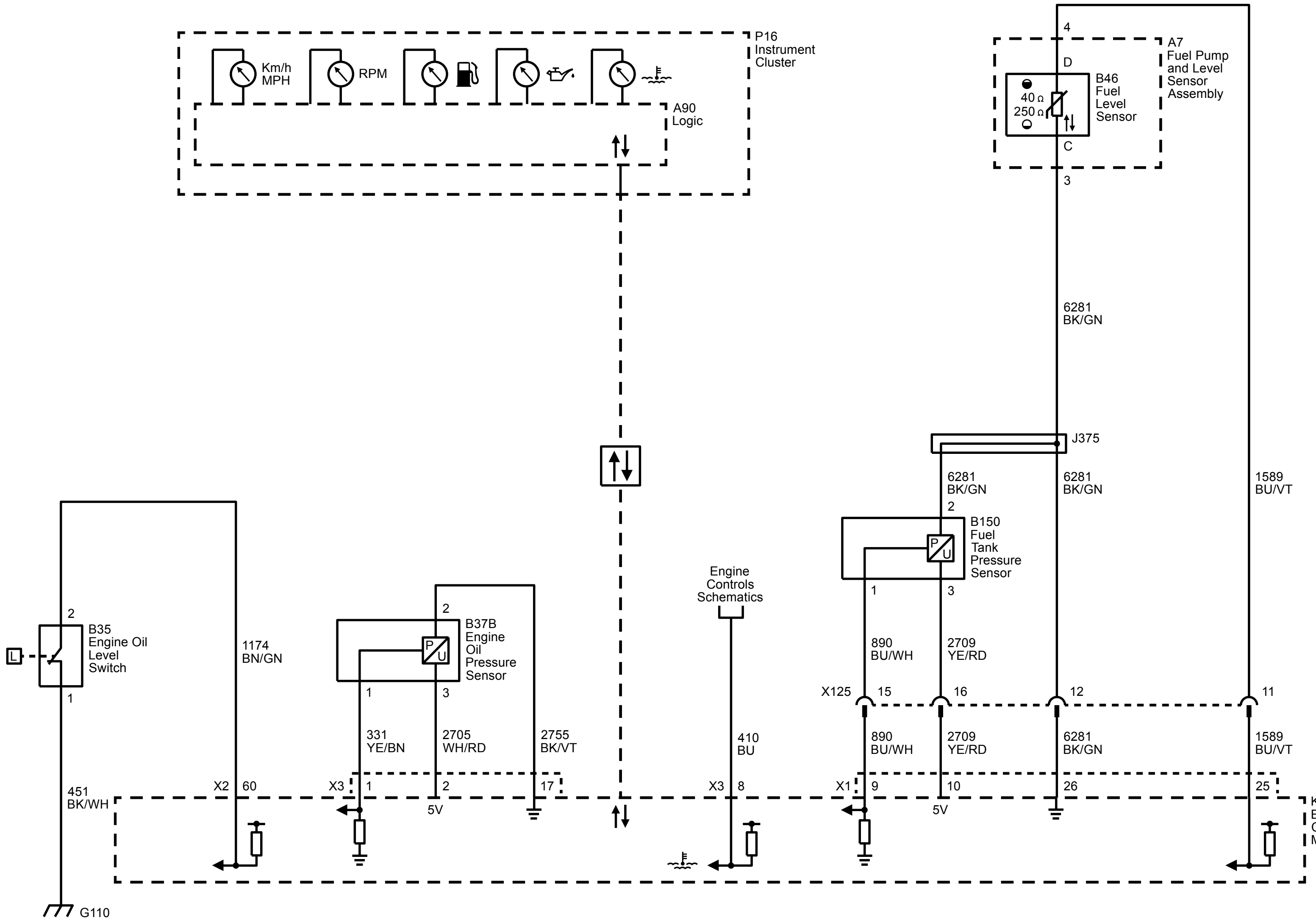
Schematic and Routing Diagrams

Instrument Cluster Schematics

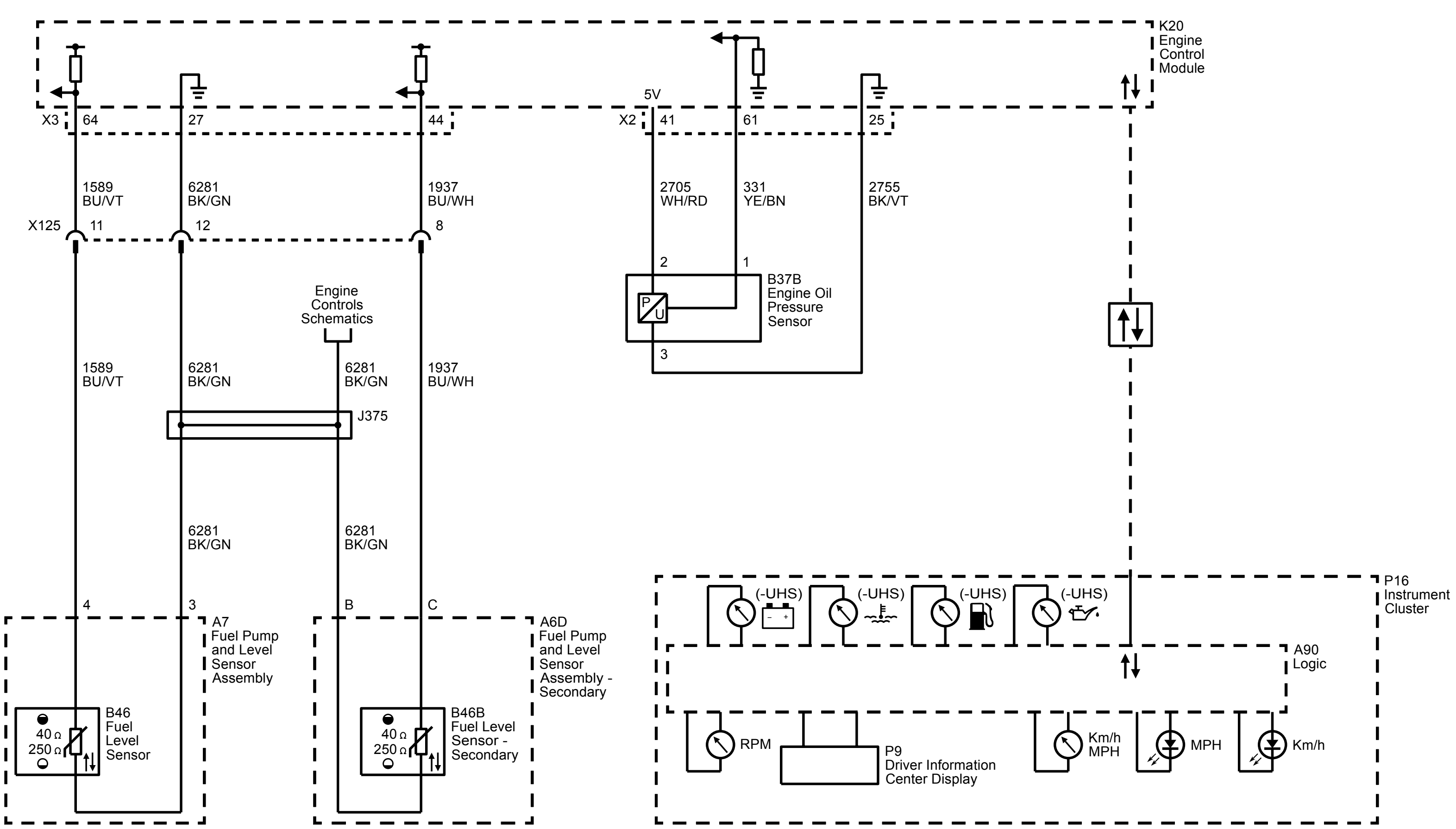
Power, Ground and Serial Data


B+
X51L
Fuse Block -
Instrument
Panel Left
KR73
Ignition
Main
Relay
F39DL
10A
F25DL
10A
X2
35
28
2840
RD/GY
J220
2840
RD/GY
1639
VT/BK
Data
Communication
Schematics
UV6
3894
GN/BK
1102
GY/GN
3999
WH/VT
3894
GN/BK
3998
GY/VT
3997
WH/GN
3998
GY/VT
3997
WH/GN
X1
7
8
21
3
5
20
17
18
2
1
P16
Instrument
Cluster
A90
Logic
B+
IGN
X1
19
1851
BK/WH
G218

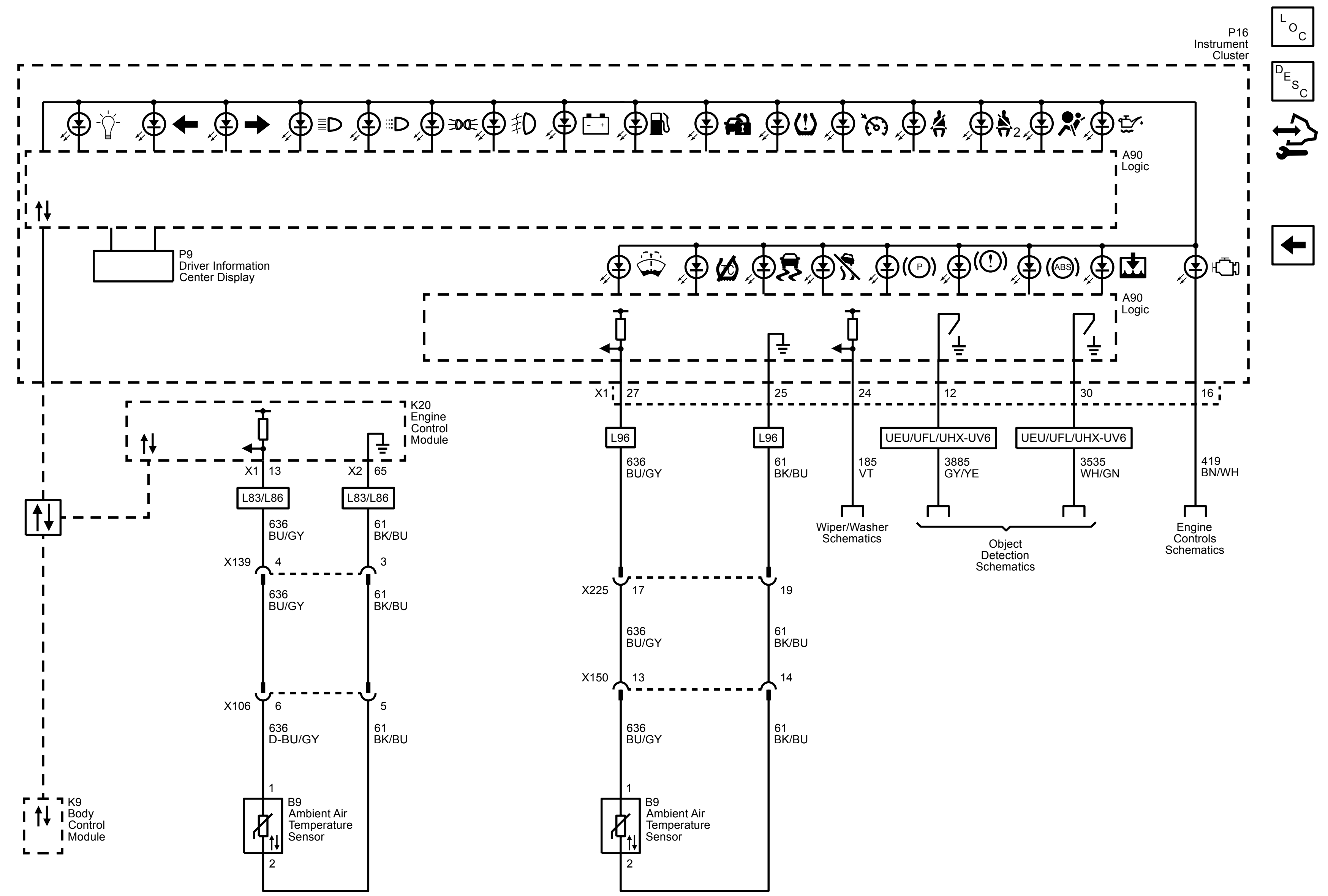
Gages (L83 or L86)


P16
Instrument
Cluster
Km/h
MPH
RPM
A90
Logic
4
D
A7
Fuel Pump
and Level
Sensor
Assembly
B46
Fuel
Level
Sensor
40 Ω
250 Ω
C
3
6281
BK/GN
J375
6281
BK/GN
6281
BK/GN
1589
BU/VT
2
B150
Fuel
Tank
Pressure
Sensor
1
3
Engine
Controls
Schematics
2
B35
Engine Oil
Level
Switch
1
1174
BN/GN
2
B37B
Engine
Oil
Pressure
Sensor
1
3
890
BU/WH
2709
YE/RD
X125
15
16
12
11
331
YE/BN
2705
WH/RD
2755
BK/VT
410
BU
890
BU/WH
2709
YE/RD
6281
BK/GN
1589
BU/VT
451
BK/WH
X2
60
X3
1
2
17
X3
8
X1
9
10
26
25
5V
5V
K20
Engine
Control
Module
G110

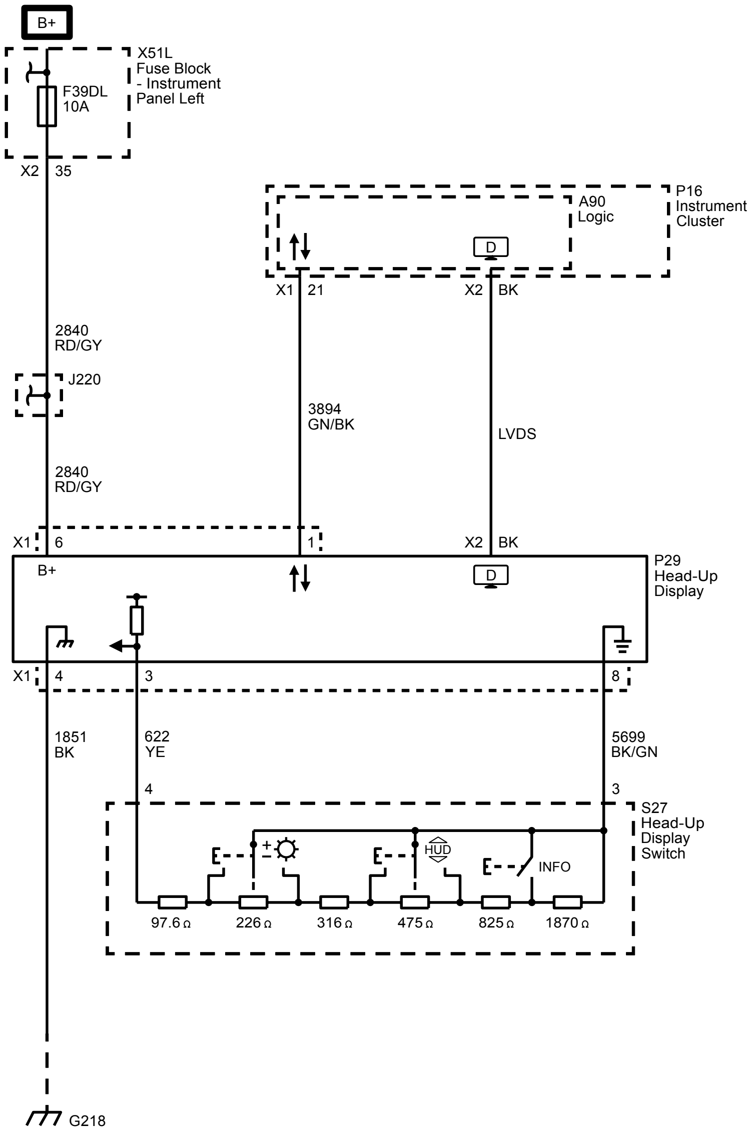
Gages (L96)


K20
Engine
Control
Module
X3
64
27
44
X2
5V
41
61
25
1589
BU/VT
6281
BK/GN
1937
BU/WH
2705
WH/RD
331
YE/BN
2755
BK/VT
X125
11
12
8
2
1
B37B
Engine Oil
Pressure
Sensor
P
U
3
Engine
Controls
Schematics
1589
BU/VT
6281
BK/GN
6281
BK/GN
1937
BU/WH
J375
6281
BK/GN
6281
BK/GN
4
3
A7
Fuel Pump
and Level
Sensor
Assembly
B
C
A6D
Fuel Pump
and Level
Sensor
Assembly -
Secondary
B46
Fuel
Level
Sensor
40 Ω
250 Ω
B46B
Fuel Level
Sensor -
Secondary
40 Ω
250 Ω
(-UHS)
(-UHS)
(-UHS)
(-UHS)
P16
Instrument
Cluster
A90
Logic
RPM
P9
Driver Information
Center Display
Km/h
MPH
MPH
Km/h

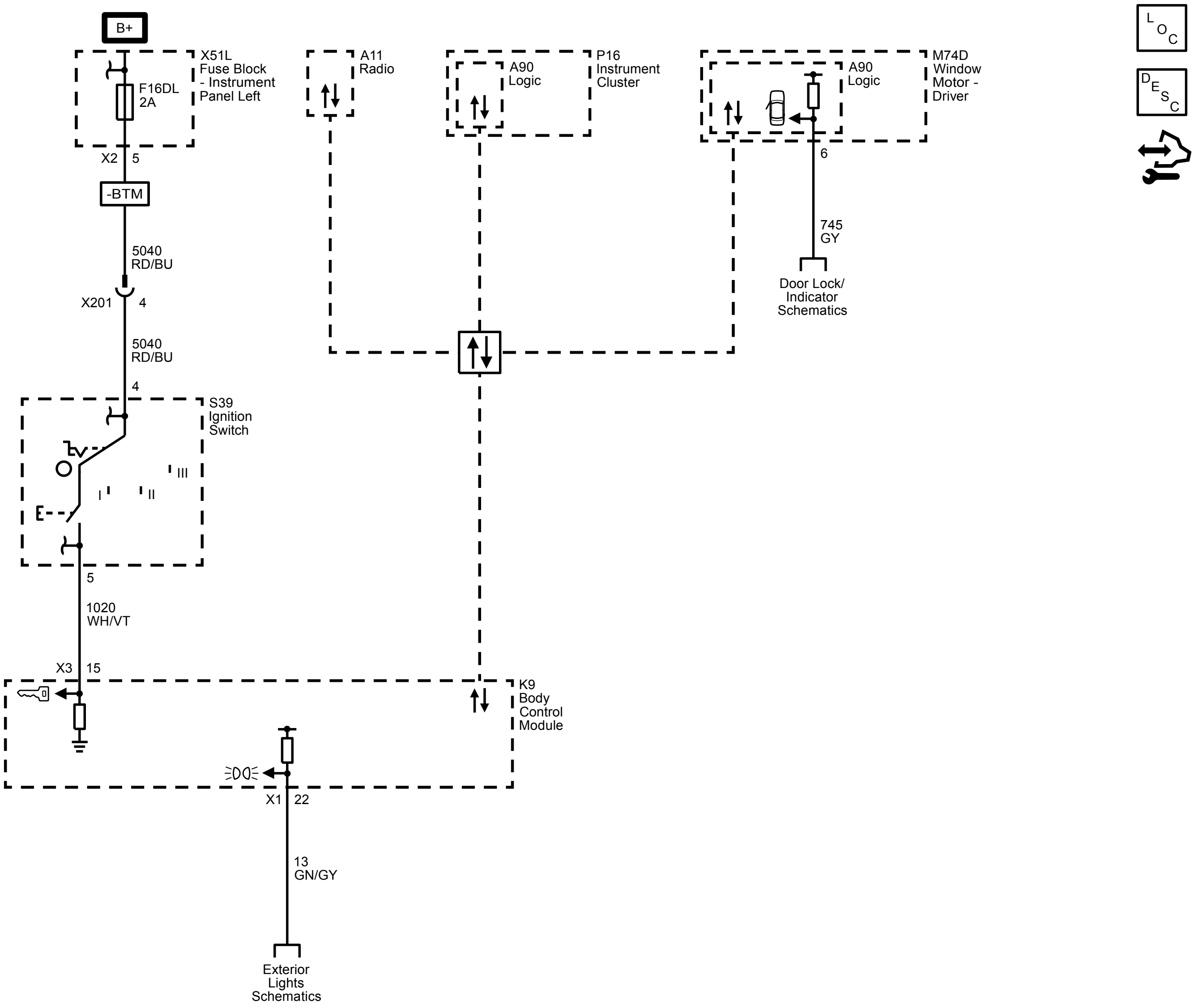
Indicators


L
O
C
D
E
S
C
P16
Instrument
Cluster
A90
Logic
P9
Driver Information
Center Display
A90
Logic
2
P
ABS
X1
27
25
24
12
30
16
L96
L96
UEU/UFL/UHX-UV6
UEU/UFL/UHX-UV6
636
BU/GY
61
BK/BU
185
VT
3885
GY/YE
3535
WH/GN
419
BN/WH
Wiper/Washer
Schematics
Object
Detection
Schematics
Engine
Controls
Schematics
K20
Engine
Control
Module
X1
13
X2
65
L83/L86
L83/L86
636
BU/GY
61
BK/BU
X139
4
3
636
BU/GY
61
BK/BU
X106
6
5
636
D-BU/GY
61
BK/BU
1
B9
Ambient Air
Temperature
Sensor
2
X225
17
19
636
BU/GY
61
BK/BU
X150
13
14
636
BU/GY
61
BK/BU
1
B9
Ambient Air
Temperature
Sensor
2
K9
Body
Control
Module

Head-Up Display Schematics


B+
X51L
Fuse Block
- Instrument
Panel Left
F39DL
10A
X2
35
P16
Instrument
Cluster
A90
Logic
D
X1
21
X2
BK
2840
RD/GY
J220
3894
GN/BK
LVDS
2840
RD/GY
X1
6
1
X2
BK
P29
Head-Up
Display
B+
D
X1
4
3
8
1851
BK
622
YE
5699
BK/GN
4
3
S27
Head-Up
Display
Switch
HUD
INFO
97.6 Ω
226 Ω
316 Ω
475 Ω
825 Ω
1870 Ω
G218

Audible Warnings


B+
X51L
Fuse Block
- Instrument
Panel Left
F16DL
2A
X2 5
-BTM
5040
RD/BU
X201 4
5040
RD/BU
4
S39
Ignition
Switch
I
II
III
5
1020
WH/VT
X3 15
A11
Radio
A90
Logic
P16
Instrument
Cluster
A90
Logic
M74D
Window
Motor -
Driver
6
745
GY
Door Lock/
Indicator
Schematics
K9
Body
Control
Module
X1 22
13
GN/GY
Exterior
Lights
Schematics
LOC
DESC

Description and Operation

Audible Warnings Description and Operation

The audible warnings alert the driver of a system concern or a critical vehicle condition. If equipped with an serial data communicating audio amplifier, the audio amplifier generates the audible warnings through the speakers. If not equipped with an audio amplifier, the radio generates the audible warnings through the speakers. The radio or audio amplifier receives audible warning requests via serial data. If the radio or audio amplifier receives multiple audible warning requests, the warning with the highest priority sounds first. Different audible warnings may sound with a different frequency or a different chime pattern, depending on the system or module making the request. The chime volume may be selectable through vehicle personalization.

Audible Warnings or Chimes

The following is a list of common audible warnings or chimes. For additional chimes or complete system description, refer to the appropriate system's Description and Operation or the vehicle owner's manual.

- Driver Seat Belt Reminder – If the vehicle is started and the seat belt is unbuckled, the BCM requests the radio or audio amplifier sound a chime to indicated that the belt is unbuckled. This is accompanied by a flashing driver seat belt indicator on the instrument cluster. If the belt remains unbuckled, the chime cycle may continue multiple times if the vehicle is driven and the indicator will remain on solid.
- Passenger Seat Belt Reminder – If the passenger presence system determines that their is an occupant in the passenger seat and the vehicle is started with the passenger seat belt unbuckled, the BCM requests the radio or audio amplifier sound a chime to indicated that the belt is unbuckled. This is accompanied by a flashing passenger seat belt indicator. If the belt remains unbuckled, the chime cycle may continue multiple times if the vehicle is driven and the indicator will remain on solid. If an object is placed on the passenger seat, the passenger presence system may interpret this as a passenger occupying the seat. Because the passenger seat belt is unbuckled, the passenger seat belt reminder chime will sound. To correct this, remove the object from the passenger seat.
- Exterior Lamps On Warning – If the exterior lamps are left on after the ignition is turned off and the driver door is opened, the BCM will request the radio or audio amplifier sound a chime as an indicator that the exterior lamps are on.
- Electric Parking Brake (if equipped) – If the electric parking brake switch is pressed while the vehicle is in motion, the parking brake control module will request the radio or audio amplifier sound a chime. To release the parking brake, the brake pedal must be pressed when the electric parking brake switch is pressed. If the brake pedal is not pressed, the parking brake control module will request the radio or audio amplifier sound a chime. A message will also appear on the driver information center.
- Delayed Locking – If the keyless entry transmitter is not in the vehicle and the door lock switch is pressed with the driver door open, the BCM will request the radio or audio amplifier sound a chime three times to indicate that the vehicle has entered a delayed locking state. The doors will automatically lock five seconds after the last door is closed.
- Object Detection – The object detection system sends various chime requests to the radio or audio amplifier during normal operation.

Additional Warnings

The following warnings have an associated instrument cluster indicator or driver information center message:

- Turn Signal Indicators – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Vehicle Overspeed Message – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Fuel Level Low Message – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Oil Pressure Indicator – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Tire Pressure Low Indicator – The radio or audio amplifier activates the audible warning as requested by the BCM.
- Antilock Brake Indicator – The radio or audio amplifier activates the audible warning as requested by the electronic brake control module.
- Engine Cooling System Messages – The radio or audio amplifier activates the audible warning as requested by the engine control module.
- Transmission Messages – The radio or audio amplifier activates the audible warning as requested by the transmission control module.

Backup Alarm (with 8S3)

When transmission placed in reverse, the Body Control Module (BCM) activates the KR61 Trailer Backup Lamps Relay which supplies 12V to the reverse lamps and the Backup Alarm simultaneously.

Head-Up Display Description and Operation

The head-up display projects an image on the windshield that is viewed from the driver seat. Information that is relevant to what the drive is currently doing is displayed, as well as any safety-critical information as it is happening.

The components of the head-up display are:

- Head-Up Display
- Instrument Cluster
- Head-Up Display Switch

Head-Up Display

The head-up display is a slave device to the instrument cluster. The head-up display is powered through ignition voltage and ground. It communicates directly with instrument cluster via serial data and only has limited self-diagnosis capacity. Head-up display DTCs are reported through the instrument cluster.

The head-up display projects a full color image onto the windshield and is only viewable from the driver seat. The image location and brightness is adjustable using the head-up display switch. The image information is received from the instrument cluster through a video cable.

Instrument Cluster

The instrument cluster sends the image information to the head-up display via a discrete video cable. The image sent to the head-up display is closely related to the information currently being displayed on the instrument cluster or driver information center. For example, if an incoming phone call is displayed in the cluster, this information will be displayed on the head-up display. If a navigation alert is shown in the cluster, then a turn-by-turn alert will display on the head-up display. When the operator interacts with the instrument cluster using the steering wheel mounted driver information center switch, the head-up display also responds to the interaction. If the operator dismisses the navigation alert on the instrument cluster, it is also removed from the head-up display.

Head-Up Display Switch

The head-up display switch is a multiplexed switch that controls the head-up display based on driver inputs. The head-up display provides the switch with a low reference and monitors a signal circuit. The head-up display switch is made up of a resistor ladder and three switches: Dim +/-, Up/Down, and Page. When a switch is pressed, the signal voltage is pulled low through the resistor ladder. When pressed, each of the switches will result in a different signal voltage seen by the head-up display, depending on the switch’s location on the resistor ladder.

Head-Up Display Operation

In normal operation, the operator may select from three different display configurations. These display configurations provide the operator with different information, with the vehicle speed being the primary item, along with the following standard indicators:

- Turn signal indicators
- High beam indicator
- Lane departure warning indicator (if equipped)
- Vehicle detected ahead indicator (if equipped)
- Adaptive cruise control on indicator (if equipped)

Standard/Speed Configuration

The head-up display projects only the vehicle speed. Additionally, the outside air temperature, compass, and time may also be displayed.

Audio Configuration

The head-up display will project the current audio information when listening to the audio system and the active phone information if the operator is on a phone call.

Navigation Configuration

The head-up display will project navigation information. If a current route is being followed, turn by turn instructions and arrows will be displayed. If no route is programed, the compass heading is displayed.

Performance Configuration

The head-up display will project RPM and PRNDL information.

Adaptive Cruise Control Configuration (if equipped)

The head-up display will project the selected following distance when adaptive cruise control is active.

Indicator/Warning Message Description and Operation

INDICATOR LIGHT ON

Refer to the OWNER'S MANUAL for the descriptions and explanations of all indicator lights.

For diagnosis and repair information related to an indicator light refer to the System Diagnosis and the Description of Operation that the message relates to.

MESSAGE DISPLAYED

Refer to the OWNER'S MANUAL for descriptions and explanations of all messages displayed.

For diagnosis and repair information related to a displayed message refer to the System Diagnosis and the Description of Operation that the message relates to.

CHANGE TIMING BELT MESSAGE

The Instrument Cluster monitors the odometer mileage to determine when timing belt (if equipped) replacement may be necessary. After the vehicle has accumulated approximately 100,000 miles (160,000 kilometers), the Instrument Cluster may display the CHANGE TIMING BELT message. After the engine timing belt has been replaced, reset the CHANGE TIMING BELT message by locating and removing the fuses that supply power to the Instrument Cluster for two minutes.

BRAKES OVERHEATED

The Electronic Brake Control Module monitors brake usage and compares it to an internal thermal model to determine if the brakes could become overheated. If the Electronic Brake Control Module determines the brakes pads have exceeded a desirable temperature based on the thermal model, it sends a serial data message to the Instrument Cluster to display the BRAKES OVERHEATED message. The message remains displayed until the estimated temperature returns to a desirable range.

Transmission Shift Lever Position Indicator

The Transmission Shift Lever Position Indicator (if equipped) is located on the center console and indicates the current transmission shift lever position. The Transmission Shift Lever Position Indicator receives power and ground and is controlled by the Body Control Module (BCM) via serial data. The Transmission Control Module determines transmission shift lever position based on signals from the Transmission Internal Mode Switch and sends the shift lever position information to the BCM via serial data.

Instrument Cluster Description and Operation

Instrument Cluster (with RPO UDC)

The instrument cluster is a multifunction module that provides the vehicle operator with information that is critical to vehicle operation, such as vehicle speed, engine RPM, oil pressure, battery voltage, fuel level, and coolant temperature, using analog gauges. The instrument cluster also provides the operator with operational warnings and message through various indicators and the driver information center. The driver information center is a one color multifunction display that is located in the instrument cluster. The driver information center has several screens that can be scrolled through by twisting the trip reset stem.

Instrument Cluster (with RPO UDD)

The instrument cluster is a multifunction module that provides the vehicle operator with information that is critical to vehicle operation, such as vehicle speed, engine RPM, oil pressure, battery voltage, fuel level, and coolant temperature, using analog gauges. The instrument cluster also provides the operator with operational warnings and message through various indicators and the driver information center. The driver information center is a full color multifunction display that is located in the instrument cluster. The driver information center is also tightly integrated with the vehicle’s infotainment system and is highly reconfigurable.

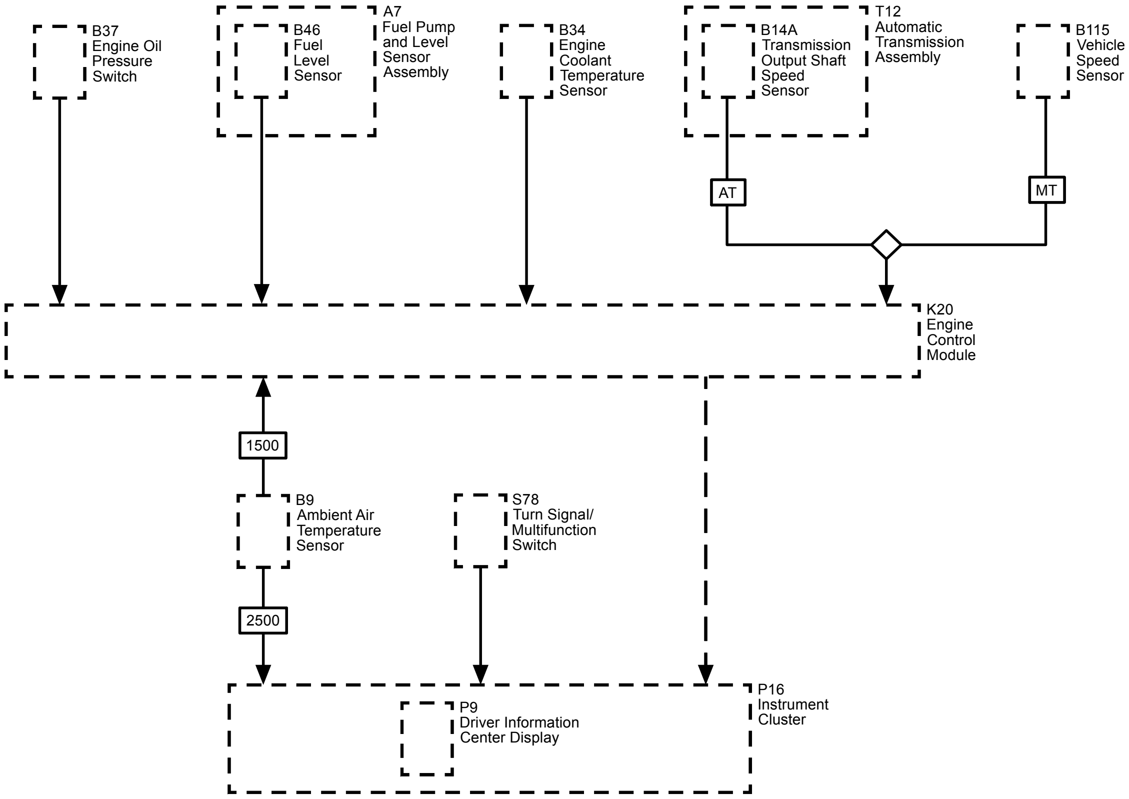
Instrument Cluster (with RPO UHS)

The instrument cluster is a multifunction module that provides the vehicle operator with information such as vehicle speed and engine RPM using analog gauges. Oil pressure, battery voltage, fuel level, and coolant temperature can also be displayed using an interactive LCD display. The instrument cluster is highly reconfigurable, with four different themes available for selection. The instrument cluster also provides the operator with operational warnings and message through various indicators and the driver information center. Because the instrument cluster is an LCD display, driver information center elements are located in various zones of the display, depending on how the instrument panel is configured.

Instrument Cluster (with RPO UDV)

The instrument cluster is a multifunction module that provides the vehicle operator with information that is critical to vehicle operation, such as vehicle speed, engine RPM, and coolant temperature, using an interactive LCD display. The instrument cluster is highly reconfigurable, with four different themes available for selection. The instrument cluster also provides the operator with operational warnings and message through various indicators and the driver information center. Because the instrument cluster is an LCD display, driver information center elements are located in various zones of the display, depending on how the instrument panel is configured.

Displays and Gauges Block Diagram


B37 Engine Oil Pressure Switch
B46 Fuel Level Sensor
A7 Fuel Pump and Level Sensor Assembly
B34 Engine Coolant Temperature Sensor
B14A Transmission Output Shaft Speed Sensor
T12 Automatic Transmission Assembly
B115 Vehicle Speed Sensor
AT
MT
K20 Engine Control Module
1500
B9 Ambient Air Temperature Sensor
S78 Turn Signal/ Multifunction Switch
2500
P16 Instrument Cluster
P9 Driver Information Center Display

Indicators and Warning Messages

Refer to Indicator/Warning Message Description and Operation.

Engine Coolant Temperature Gauge

The instrument cluster displays the engine coolant temperature as determined by the engine control module (ECM). The ECM sends the engine coolant temperature information via serial data to the body control module (BCM). The BCM then sends the information via a serial data to the instrument cluster to display the engine coolant temperature.

Engine Oil Pressure Gauge (if equipped)

The IPC displays the engine oil pressure as determined by the ECM. The ECM monitors the engine oil pressure sensor. The IPC receives a serial data message from the ECM indicating the engine oil pressure. The engine oil pressure gauge defaults to 0 kPa (0 psi) or below if:

- The ECM detects a malfunction in the engine oil pressure sensor signal circuit.

- The IPC detects a loss of serial data communication with the ECM.

Fuel Level Gauge

The instrument cluster displays the fuel level based on the information from the ECM. The ECM converts the data from the fuel level sensors to a fuel level signal. The ECM sends the fuel level signal via serial data to the BCM. The BCM then sends the information via serial data to the instrument cluster to display the fuel level. If the fuel level falls under 11% the instrument cluster will illuminate the low fuel level indicator. The fuel gauge defaults to empty if:

- The ECM detects a malfunction in the fuel level sensor circuit.
- The BCM detects a loss of serial data communications with the ECM.
- The instrument cluster detects a loss of serial data communications with the BCM.

Speedometer

The instrument cluster displays the vehicle speed based on the information from the ECM. The ECM sends the vehicle speed information via serial data to the BCM. The BCM then sends the vehicle speed information via serial data to the instrument cluster to display the vehicle speed.

Odometer

The instrument cluster displays the vehicle odometer in the driver information center. The ECM send a distance rolling count message via serial data to the body control module (BCM). The BCM uses this information to calculate the vehicle odometer. This odometer value is then sent to the instrument cluster. The instrument cluster does not calculate the odometer.

The odometer value is stored in multiple modules. The instrument cluster is a secondary storage module for the odometer, while the BCM is the primary storage and accumulator.

In addition to storing the odometer value for the vehicle, the instrument cluster and the BCM store the VIN. Software checks are performed to ensure these modules, and their stored odometer information, can not be move or transferred between different vehicles.

Tachometer

The instrument cluster displays the engine speed based on the information from the ECM. The ECM converts the data from the crankshaft position sensor to an engine revolution signal. The ECM sends the engine speed information via serial data to the BCM. The BCM then sends the information via serial data to the instrument cluster to display the engine speed.

Compass

The vehicle compass information is gather through the compass module or vehicle communication interface module (VCIM). The compass module or VCIM determines vehicle direction and communicates this with the BCM through serial data. The BCM sends the compass information to the instrument cluster via serial data, where it is displayed.

Outside Air Temperature (1500 series)

The Ambient Air Temperature Sensor is located behind the grille and varies it’s resistance with temperature. The Engine Control Module (ECM) reads the resistance value to determine temperature. The time of and rate of the temperature update is based on an algorithm in the ECM software. Factors such as, last reading, current reading, length of time vehicle is been off/on, power mode, vehicle speed, driven distance, and sensor location are all considered by the ECM to know when to update the displayed temperature. For example, if the sensor is located near the engine compartment, and the vehicle has been turned off for only 10 minutes then restarted, the ECM will wait until the vehicle is driven to get more accurate air flow across the sensor before it updates the display.

Outside Air Temperature (2500 series)

The Ambient Air Temperature Sensor is located behind the grille and varies it’s resistance with temperature. The Instrument Cluster reads the resistance value to determine temperature. The time of and rate of the temperature update is based on an algorithm in the Instrument Cluster software. Factors such as, last reading, current reading, length of time vehicle is been off/on, power mode, vehicle speed, driven distance, and sensor location are all considered by the Instrument Cluster to know when to update the displayed temperature. For example, if the sensor is located near the engine compartment, and the vehicle has been turned off for only 10 minutes then restarted, the Instrument Cluster will wait until the vehicle is driven to get more accurate air flow across the sensor before it updates the display.

Driver Information Center Display (with RPO UDD)

The driver information center is located in the lower middle portion of the instrument cluster, between the speedometer and the tachometer. The driver information center displays information about the vehicle and allows the operator to access applications. It also displays warning messages if a system problem is detected.

The driver information center is made up of three zones. The left zone is a list of the applications that can be displayed. The right zone contains choices to customize what information is displayed for the respective application chosen. In the middle is the interactive application display zone. The application display zone allows access to the navigation application, audio application, phone application, or settings applications. The information display zone contains multiple pages that display vehicle information. The compass and PRNDL are displayed at all times in the lower portion of the display zone.

The driver information center can also be configured with several different themes. Changing the theme is accomplished using the infotainment system faceplate settings page. The chosen theme is used for both the faceplate and the driver information center displays.

Instrument Cluster Configuration (with RPO UHS, UDV)

The instrument cluster is highly interactive and reconfigurable. The operator can select from four different display configures and each of these configuration may contain one, two, or three separate display zones. Regardless of which configuration is selected, the vehicle odometer and PRNDL are always displayed in the lower left and lower right corners of the display.

The different display configurations are:

- Simple – The most basic of the available configurations, the Simple configuration includes four static information display zones and one interactive information display zone. The infotainment display zone is located on the left side of the display and displays phone, turn-by-turn navigation, and audio information. The speedometer and compass are located in the upper middle of the display. On the right side of the display is a graphical representation of the fuel level and fuel range.

  Below the speedometer, in the lower middle of the display, is the interactive information display zone. The information display zone contains multiple pages that can be scrolled through and selected using the steering wheel mounted driver information center switch.

- Performance – The Performance configuration contains three static information zones, one interactive information display zone, and one interactive application display zone. The speedometer and tachometer/fuel level gauge are located on the left and right of the display. In between the speedometer and tachometer is a static information display zone that displays current information while the operator scrolls through other pages in the interactive application display zone.

  In the middle of the speedometer is an interactive information display zone. This display zone has a limited number of selection and will only display a digital speedometer, a navigation map, a settings page with sub-menus, or a blank page.

Below the tachometer and extending into the lower middle of the display is an interactive application display zone. The application display zone allows access to the navigation application, audio application, phone application, settings application, or information application. Unlike the information display zone that is located within the speedometer, the information application is fully featured and allows access to all available information pages.

- Balanced – The Balanced configuration contains three static information zones, two interactive information display zones, and one interactive application display zone. The tachometer is located on the left side of the display, the speedometer in the middle, and the coolant temperature/fuel level gauge on the right.

  Located in the tachometer is an interactive information display zone.

  In the speedometer is an interactive information display zone. This display zone has a limited number of selection and will only display a digital speedometer, a navigation map, a settings page with sub-menus, or a blank page.

  An interactive application display zone is located in the coolant temperature/fuel level gauge. The application display zone allows access to the navigation application, audio application, phone application, or settings application.

- Enhanced – The Enhanced configuration contains four static information zones, two interactive information display zones, and one interactive application display zone. The speedometer in the upper middle of the display, a navigation map or compass in located on the upper left, and a fuel level gauge and fuel range display on the right.

  Located on the left and right lower portion of the display are interactive information display zones.

  An interactive application display zone is located in the middle of the display. The application display zone allows access to the navigation application, audio application, phone application, or settings application.

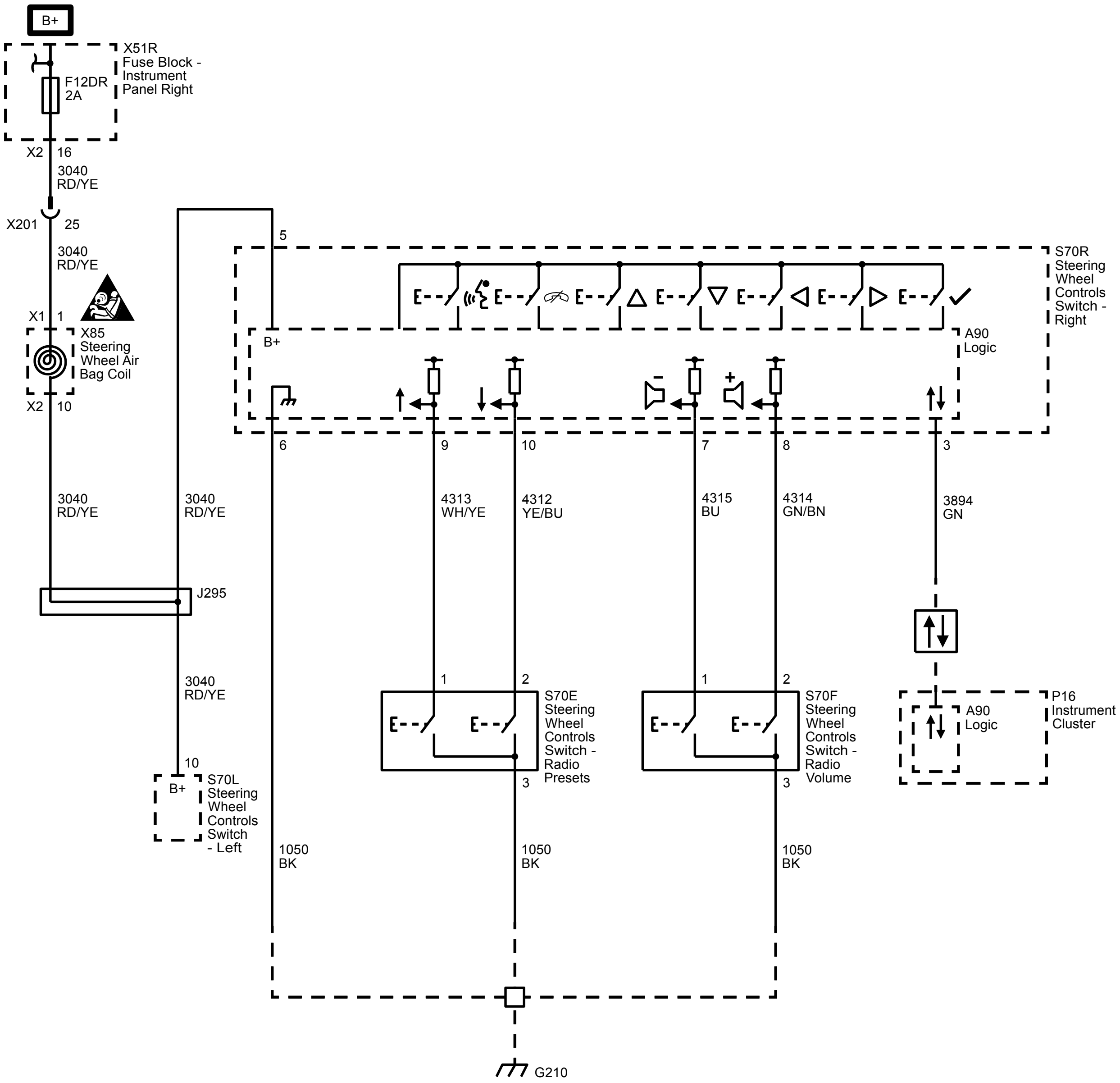
Driver Information and Entertainment

Secondary and Configurable Customer Controls

Schematic and Routing Diagrams

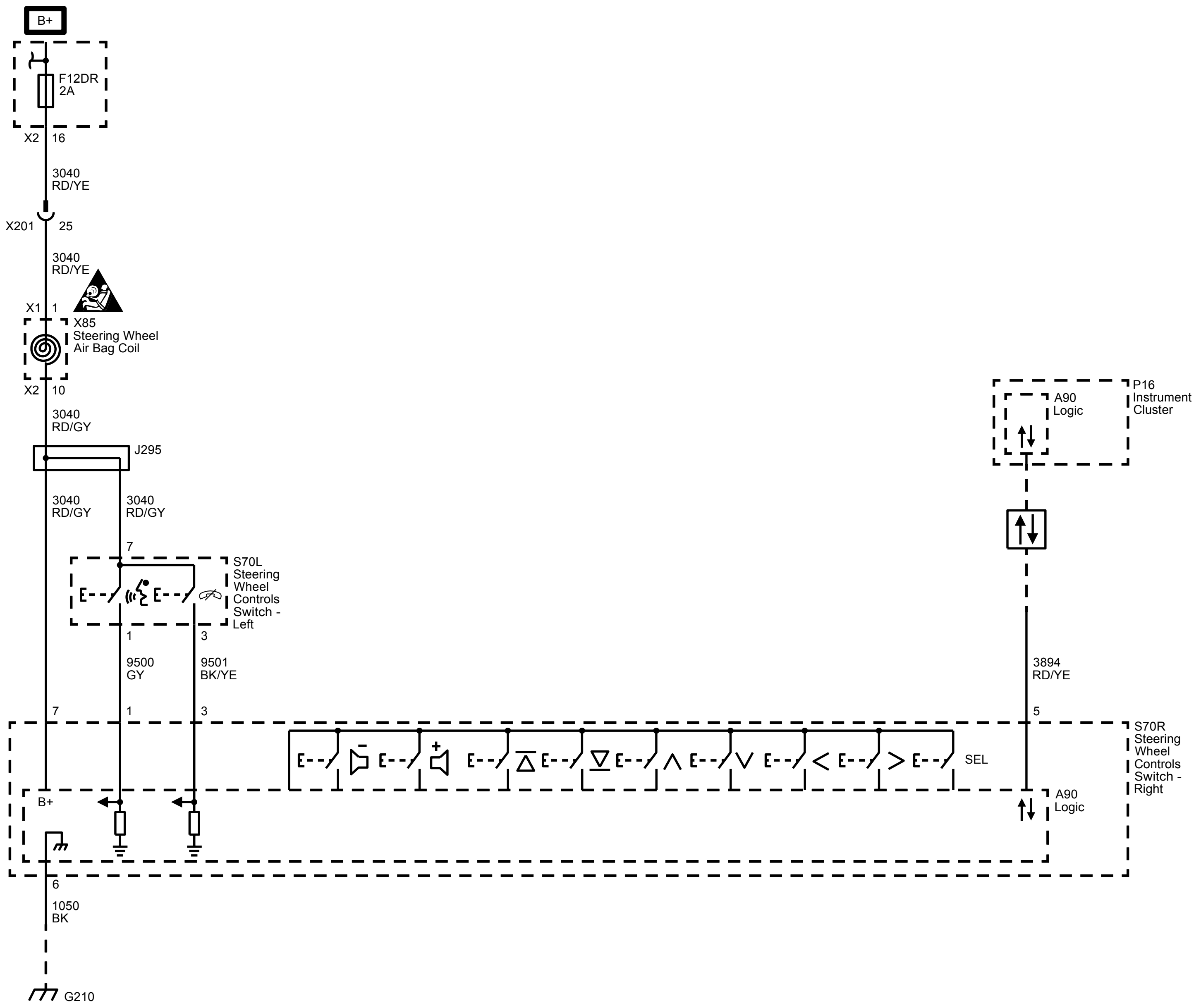
Steering Wheel Secondary/Configurable Control Schematics

Steering Wheel Radio Controls (X88 or Z88 with UK3)



B+
X51R
Fuse Block - Instrument Panel Right
F12DR
2A
X2
16
3040
RD/YE
X201
25
3040
RD/YE
X1
1
X85
Steering Wheel Air Bag Coil
X2
10
3040
RD/YE
3040
RD/YE
J295
3040
RD/YE
10
B+
S70L
Steering Wheel Controls Switch - Left
5
S70R
Steering Wheel Controls Switch - Right
B+
A90
Logic
6
9
10
7
8
3
4313
WH/YE
4312
YE/BU
4315
BU
4314
GN/BN
3894
GN
1
2
S70E
Steering Wheel Controls Switch - Radio Presets
3
1
2
S70F
Steering Wheel Controls Switch - Radio Volume
3
P16
Instrument Cluster
A90
Logic
1050
BK
1050
BK
1050
BK
G210

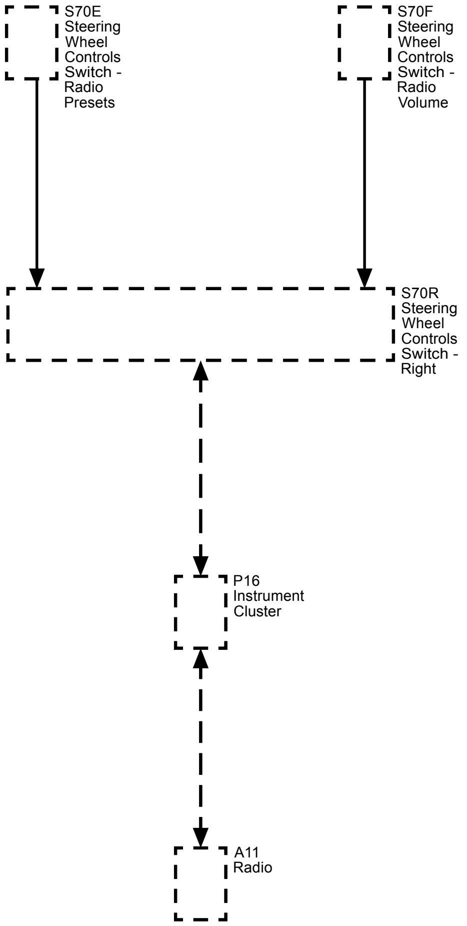
Steering Wheel Radio Controls (Z75)


B+
F12DR
2A
X2
16
3040
RD/YE
X201
25
3040
RD/YE
X1
1
X85
Steering Wheel
Air Bag Coil
X2
10
3040
RD/GY
J295
3040
RD/GY
3040
RD/GY
7
S70L
Steering
Wheel
Controls
Switch -
Left
1
3
9500
GY
9501
BK/YE
7
1
3
P16
Instrument
Cluster
A90
Logic
3894
RD/YE
5
S70R
Steering
Wheel
Controls
Switch -
Right
SEL
B+
A90
Logic
6
1050
BK
G210

Description and Operation

Steering Wheel Controls Description and Operation

Secondary Controls Block Diagram


S70E Steering Wheel Controls Switch - Radio Presets
S70F Steering Wheel Controls Switch - Radio Volume
S70R Steering Wheel Controls Switch - Right
P16 Instrument Cluster
A11 Radio

The steering wheel control switches duplicate the function of the primary controls of the associated component, through a network of momentary contact switches.

The Steering Wheel Controls are divided into a right-hand set and left-hand set. The right-hand switch is connected to the IPC LIN serial data and provides input from the left-hand, left-hand rear, and right-hand rear switches

The right-hand switch controller consists of UP/DOWN/LEFT/RIGHT directional, center “select” , Push-to-Talk, and Mute buttons. The LEFT/RIGHT buttons navigate the display regions of the cluster. The UP/DOWN buttons navigate the menus. The right-hand rear switch consists of volume up and volume down buttons. The left-hand rear switch consists of favorite up and favorite down buttons.

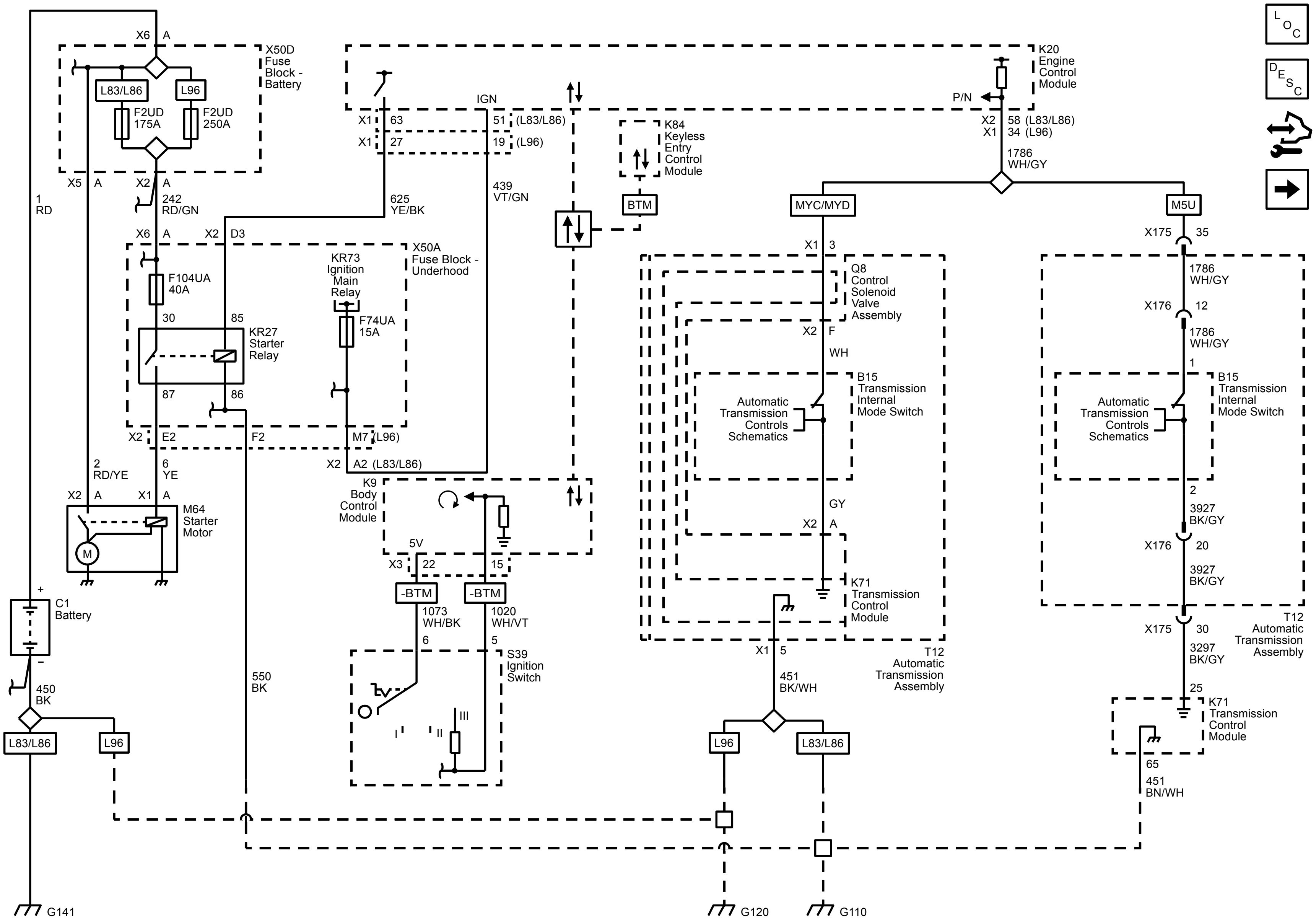
Engine/Propulsion

12 V Starting and Charging

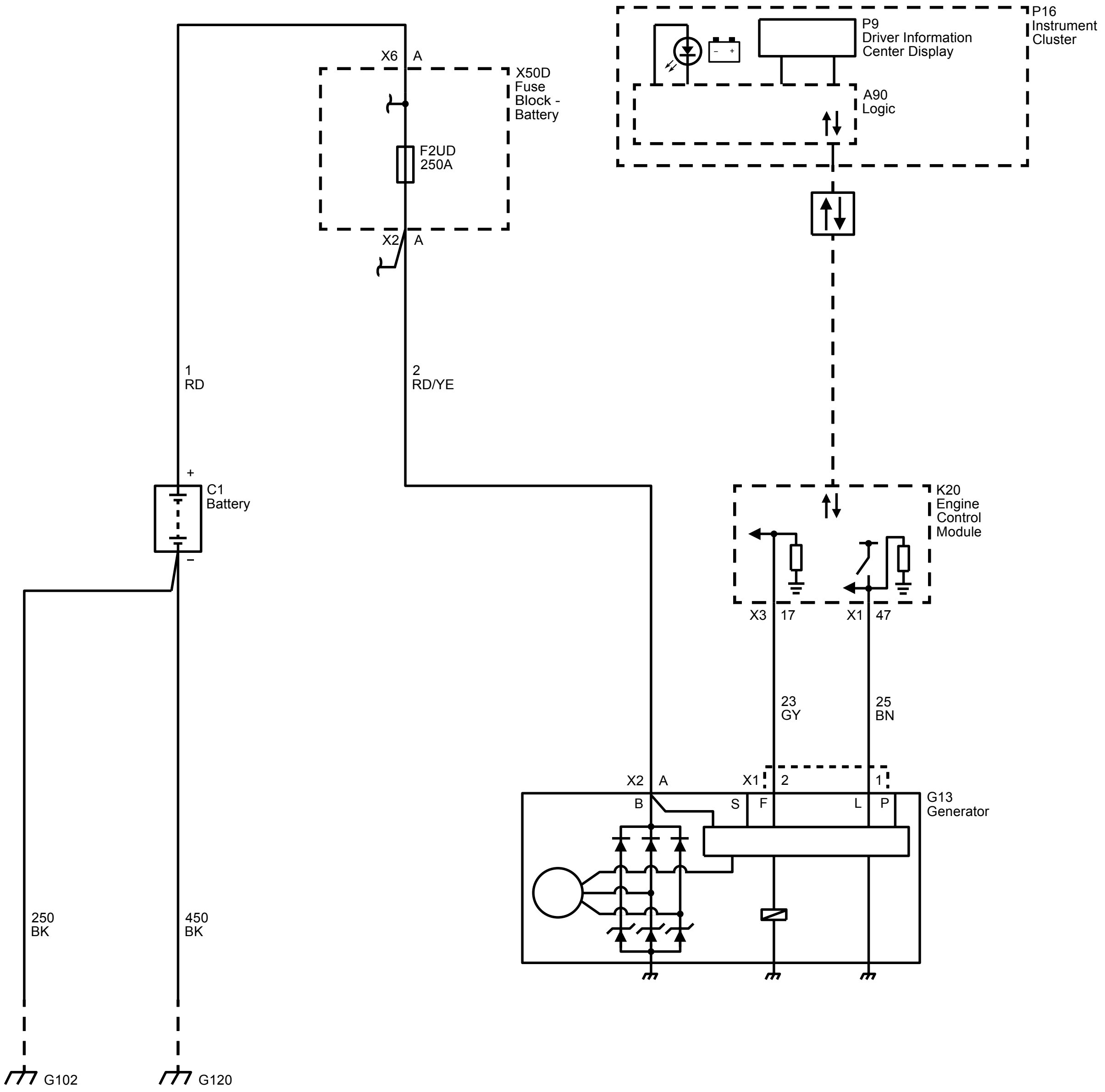
Schematic and Routing Diagrams

Starting and Charging Schematics

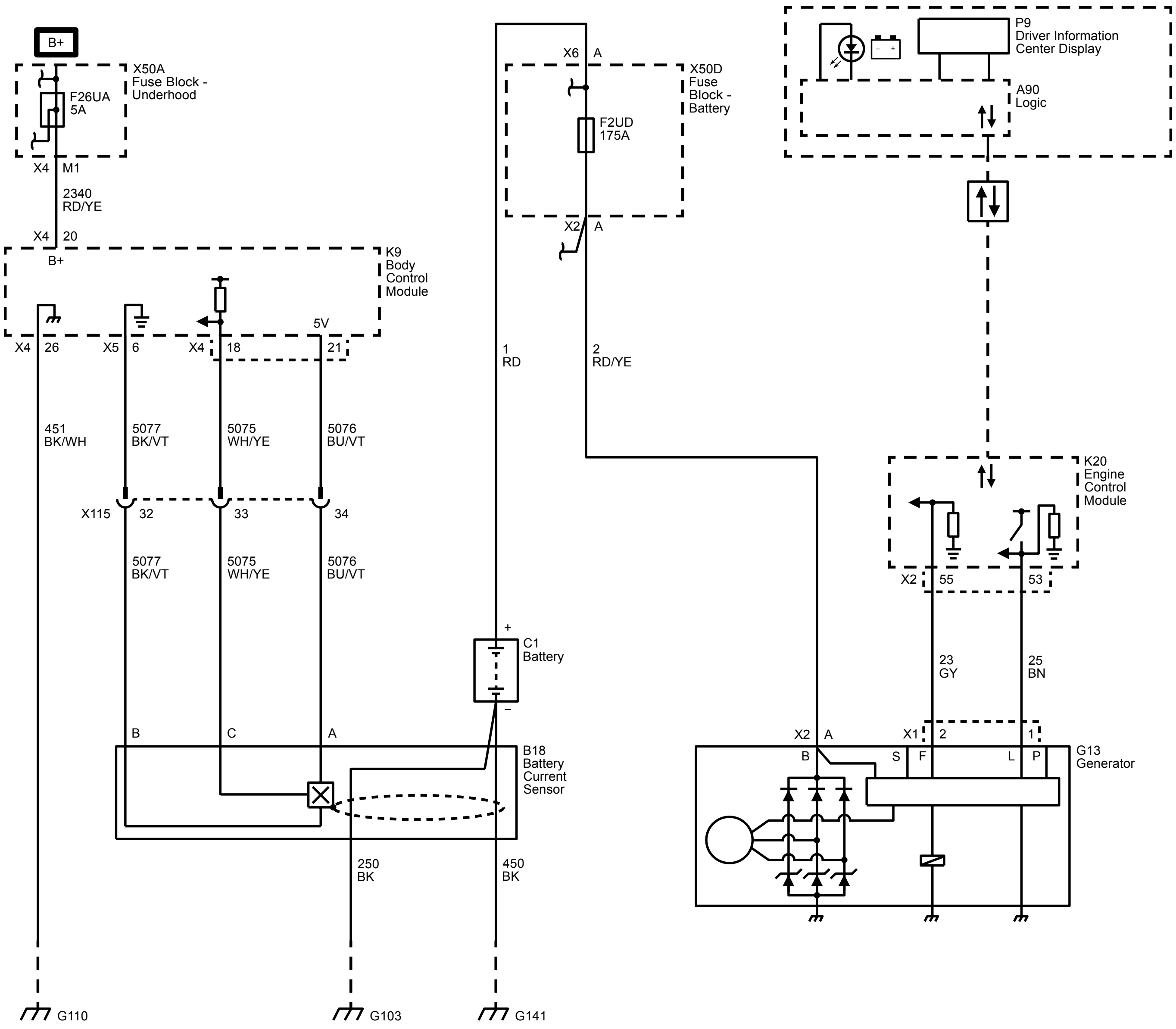
Starting System



X6 A
X50D Fuse Block - Battery
L83/L86
L96
F2UD 175A
F2UD 250A
X5 A
X2 A
1 RD
242 RD/GN
X6 A
X2 D3
X50A Fuse Block - Underhood
F104UA 40A
KR73 Ignition Main Relay
F74UA 15A
30
85
KR27 Starter Relay
87
86
X2 E2
F2
M7 (L96)
X2 A2 (L83/L86)
2 RD/YE
6 YE
X2 A
X1 A
M64 Starter Motor
M
+
C1 Battery
−
450 BK
L83/L86
L96
G141
550 BK
IGN
X1 63
51 (L83/L86)
X1 27
19 (L96)
625 YE/BK
439 VT/GN
K9 Body Control Module
5V
X3 22
15
-BTM
-BTM
1073 WH/BK
1020 WH/VT
6
5
S39 Ignition Switch
I
II
III
K84 Keyless Entry Control Module
BTM
K20 Engine Control Module
P/N
X2 58 (L83/L86)
X1 34 (L96)
1786 WH/GY
MYC/MYD
M5U
X1 3
Q8 Control Solenoid Valve Assembly
X2 F
WH
B15 Transmission Internal Mode Switch
Automatic Transmission Controls Schematics
GY
X2 A
K71 Transmission Control Module
X1 5
T12 Automatic Transmission Assembly
451 BK/WH
L96
L83/L86
G120
G110
X175 35
1786 WH/GY
X176 12
1786 WH/GY
1
B15 Transmission Internal Mode Switch
Automatic Transmission Controls Schematics
2
3927 BK/GY
X176 20
3927 BK/GY
X175 30
T12 Automatic Transmission Assembly
3297 BK/GY
25
K71 Transmission Control Module
65
451 BN/WH


X6 A
X50D
Fuse
Block -
Battery
F2UD
250A
X2 A
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
1
RD
2
RD/YE
+
C1
Battery
−
K20
Engine
Control
Module
X3 17
X1 47
23
GY
25
BN
X2 A
X1 2
1
G13
Generator
B
S
F
L
P
250
BK
450
BK
G102
G120

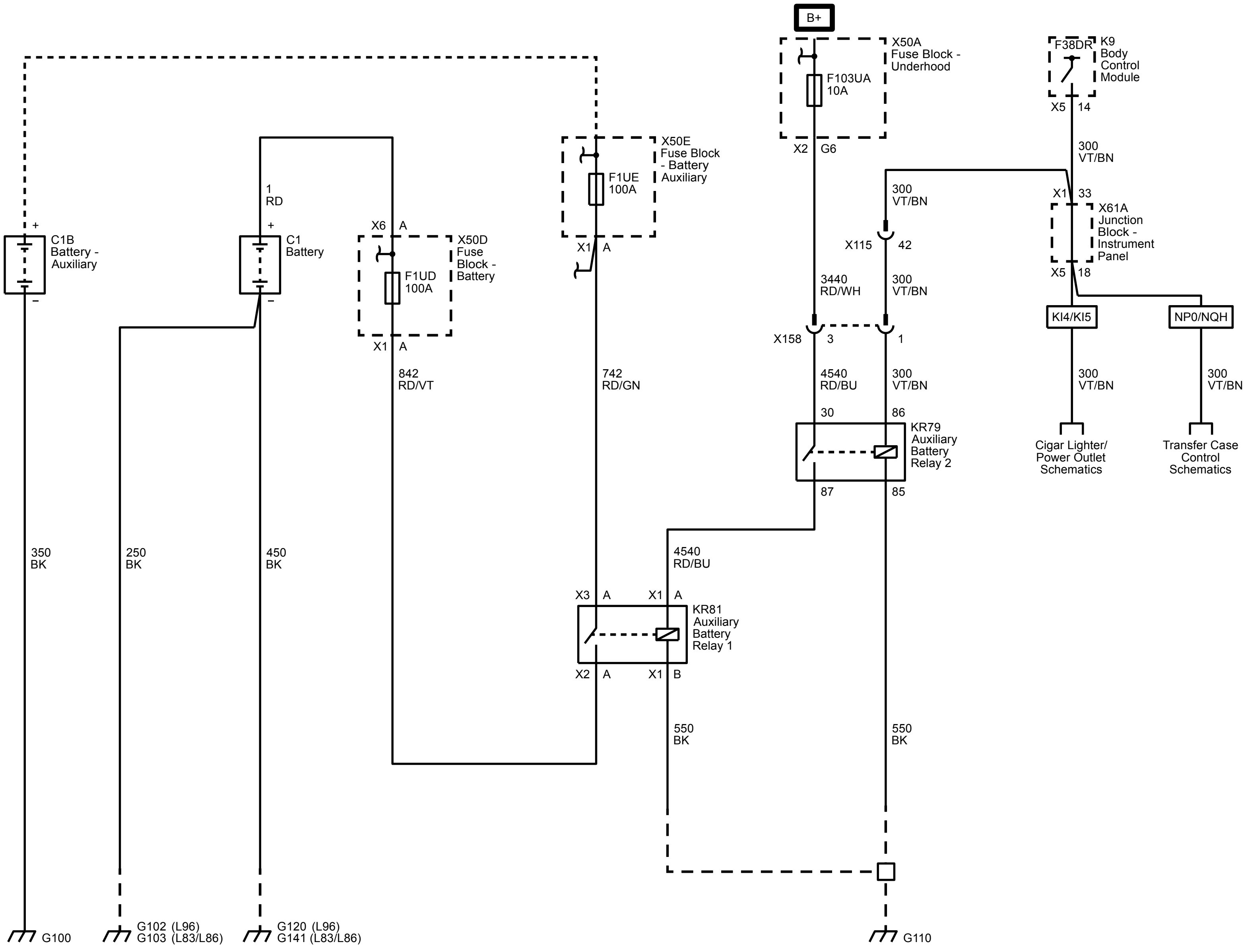
Charging (L83 or L86)



B+
X50A
Fuse Block - Underhood
F26UA
5A
X4
M1
2340
RD/YE
X4
20
B+
K9
Body
Control
Module
5V
X4
26
X5
6
X4
18
21
451
BK/WH
5077
BK/VT
5075
WH/YE
5076
BU/VT
X115
32
33
34
5077
BK/VT
5075
WH/YE
5076
BU/VT
B
C
A
B18
Battery
Current
Sensor
250
BK
450
BK
G110
G103
G141
X6
A
X50D
Fuse
Block -
Battery
F2UD
175A
X2
A
1
RD
2
RD/YE
+
C1
Battery
−
P9
Driver Information
Center Display
P16
Instrument
Cluster
A90
Logic
K20
Engine
Control
Module
X2
55
53
23
GY
25
BN
X2
A
X1
2
1
B
S
F
L
P
G13
Generator

Auxiliary Battery Schematics

Auxiliary Battery Relays (5W4 or 9C1)



B+
X50A Fuse Block - Underhood
F103UA 10A
X2 G6
F38DR
K9 Body Control Module
X5 14
300 VT/BN
X1 33
X61A Junction Block - Instrument Panel
X5 18
KI4/KI5
NP0/NQH
300 VT/BN
300 VT/BN
Cigar Lighter/ Power Outlet Schematics
Transfer Case Control Schematics
300 VT/BN
X115 42
3440 RD/WH
300 VT/BN
X158 3
1
4540 RD/BU
300 VT/BN
30
86
KR79 Auxiliary Battery Relay 2
87
85
4540 RD/BU
X50E Fuse Block - Battery Auxiliary
F1UE 100A
X1 A
742 RD/GN
X3 A
X1 A
KR81 Auxiliary Battery Relay 1
X2 A
X1 B
550 BK
550 BK
G110
+
C1B Battery - Auxiliary
–
350 BK
G100
1 RD
+
C1 Battery
–
250 BK
450 BK
G102 (L96)
G103 (L83/L86)
G120 (L96)
G141 (L83/L86)
X6 A
X50D Fuse Block - Battery
F1UD 100A
X1 A
842 RD/VT

Description and Operation

Battery Description and Operation

Warning: Batteries produce explosive gases, contain corrosive acid, and supply levels of electrical current high enough to cause burns. Therefore, to reduce the risk of personal injury when working near a battery:

- **Always shield your eyes and avoid leaning over the battery whenever possible.**
- **Do not expose the battery to open flames or sparks.**
- **Do not allow the battery electrolyte to contact the eyes or the skin. Flush immediately and thoroughly any contacted areas with water and get medical help.**
- **Follow each step of the jump starting procedure in order.**
- **Treat both the booster and the discharged batteries carefully when using the jumper cables.**

Batteries that are no longer wanted must be disposed of by an approved battery recycler and must never be thrown in the trash or sent to a landfill.

Batteries that are not part of the vehicle itself, not the battery under the hood, must only be transported on public streets for business purposes via approved hazardous material transportation procedures.

Battery storage, charging and testing facilities in repair shops must meet various requirements for ventilation, safety equipment, material segregation, etc.

The maintenance free battery is standard. There are no vent plugs in the cover. The battery is completely sealed except for 2 small vent holes in the side. These vent holes allow the small amount of gas that is produced in the battery to escape.

The battery has 3 functions as a major source of energy:

- Engine cranking
- Voltage stabilizer
- Alternate source of energy with generator overload

Battery Low Start Vehicle Message

The body control module (BCM) monitors battery positive voltage to determine battery state of charge. If one or more of the BCM battery positive voltage terminals measure less than approximately 11.6V compared to the BCM ground circuits, this message will display and four chimes may sound. Start the vehicle immediately. If the vehicle is not started and the battery continues to discharge, the climate controls, heated seats, and audio systems will shut off and the vehicle may require a jump start. These systems will function again after the vehicle is started.

Battery Ratings

A battery has 2 ratings:

- Cold cranking amperage
- Amperage hours

When a battery is replaced use a battery with similar ratings. See battery specification label on the original battery.

Amperage Hours

The amperage hour rating tells you how much amperage is available when discharged evenly over a 20 hour period. The amperage hour rating is cumulative, so in order to know how many constant amperage the battery will output for 20 h, you have to divide the amperage hour rating by 20. Example: If a battery has an amperage hour rating of 74, dividing by 20 = 3.75. Such a battery can carry a 3.75 A load for 20 hours before dropping to 10.5 V. (10.5 V is the fully discharged level, at which point the battery needs to be recharged.) A battery with an amperage hour rating of 55 will carry a 2.75 A load for 20 hours before dropping to 10.5 V.

Cold Cranking Amperage

The cold cranking amperage is an indication of the ability of the battery to crank the engine at cold temperatures. The cold cranking amperage rating is the minimum amperage the battery must maintain for 30 seconds at −18°C (0°F) while maintaining at least 7.2 V. See battery label for the cold cranking amperage rating of this battery.

Charging System Description and Operation

Electrical Power Management Overview

The electrical power management system is designed to monitor and control the charging system and send diagnostic messages to alert the driver of possible problems with the battery and generator. This electrical power management system primarily utilizes existing on-board computer capability to maximize the effectiveness of the generator, to manage the load, improve battery state-of-charge and life, and minimize the system's impact on fuel economy. The electrical power management system performs 3 functions:

- It monitors the battery voltage and estimates the battery condition.
- It takes corrective actions by boosting idle speeds, and adjusting the regulated voltage.
- It performs diagnostics and driver notification.

The battery condition is estimated during ignition-off and during ignition-on. During ignition-off the state-of-charge of the battery is determined by measuring the open-circuit voltage. The state-of-charge is a function of the acid concentration and the internal resistance of the battery, and is estimated by reading the battery open circuit voltage when the battery has been at rest for several hours.

The state-of-charge can be used as a diagnostic tool to tell the customer or the dealer the condition of the battery. Throughout ignition-on, the algorithm continuously estimates state-of-charge based on adjusted net amp hours, battery capacity, initial state-of-charge, and temperature.

While running, the battery degree of discharge is primarily determined by a battery current sensor, which is integrated to obtain net amp hours.

In addition, the electrical power management function is designed to perform regulated voltage control to improve battery state-of-charge, battery life, and fuel economy. This is accomplished by using knowledge of the battery state-of-charge and temperature to set the charging voltage to an optimum battery voltage level for recharging without detriment to battery life.

The Charging System Description and Operation is divided into 3 sections. The first section describes the charging system components and their integration into the electrical power management. The second section describes charging system operation. The third section describes the instrument panel cluster operation of the charge indicator, driver information center messages, and voltmeter operation.

Charging System Components

Generator

The generator is a serviceable component. If there is a diagnosed failure of the generator it must be replaced as an assembly. The engine drive belt drives the generator. When the rotor is spun it induces an alternating current (AC) into the stator windings. The AC voltage is then sent through a series of diodes for rectification. The rectified voltage has been converted into a direct current (DC) for use by the vehicles electrical system to maintain electrical loads and the battery charge. The voltage regulator integral to the generator controls the output of the generator. It is not serviceable. The voltage regulator controls the amount of current provided to the rotor. If the generator has field control circuit failure, the generator defaults to an output voltage of 13.8 V.

Body Control Module (BCM)

The body control module (BCM) is a GMLAN device. It communicates with the engine control module (ECM) and the instrument panel cluster for electrical power management (electrical power management) operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator turn on signal circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors a battery current sensor, the battery positive voltage circuit, and estimated battery temperature to determine battery state of charge. The BCM performs idle boost.

Battery Current Sensor

The battery current sensor is a serviceable component that is connected to either the negative or positive battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5-volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–95 percent. Between 0–5 percent and 95–100 percent are for diagnostic purposes.

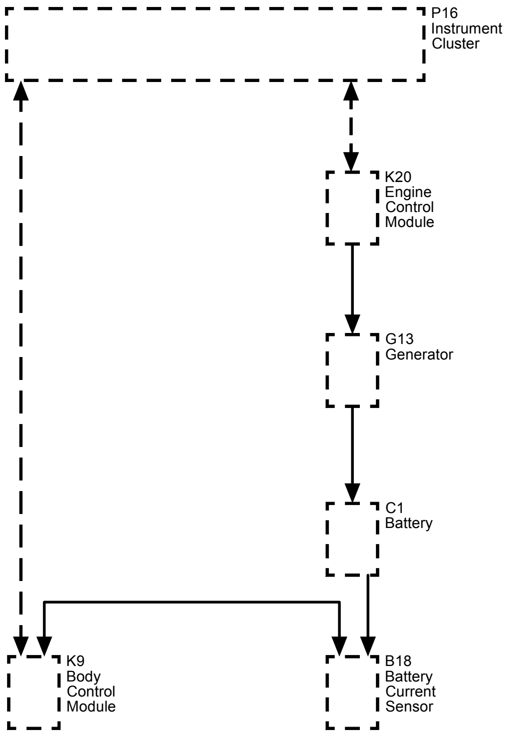
Engine Control Module (ECM)

When the engine is running, the generator turn-on signal is sent to the generator from the ECM, turning on the regulator. The generator's voltage regulator controls current to the rotor, thereby controlling the output voltage. The rotor current is proportional to the electrical pulse width supplied by the regulator. When the engine is started, the regulator senses generator rotation by detecting AC voltage at the stator through an internal wire. Once the engine is running, the regulator varies the field current by controlling the pulse width. This regulates the generator output voltage for proper battery charging and electrical system operation. The generator field duty terminal is connected internally to the voltage regulator and externally to the ECM. When the voltage regulator detects a charging system problem, it grounds this circuit to signal the ECM that a problem exists. The ECM monitors the generator field duty cycle signal circuit, and receives control decisions based on information from the BCM.

Instrument Panel Cluster

The instrument panel cluster provides the customer notification in case a concern with the charging system. There are 2 means of notification, a charge indicator and a driver information center message of SERVICE BATTERY CHARGING SYSTEM if equipped.

Charging System Block Diagram


P16
Instrument
Cluster
K20
Engine
Control
Module
G13
Generator
C1
Battery
K9
Body
Control
Module
B18
Battery
Current
Sensor

Charging System Operation

The purpose of the charging system is to maintain the battery charge and vehicle loads. There are 6 modes of operation and they include:

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Headlamp Mode
- Start Up Mode
- Voltage Reduction Mode

The engine control module (ECM) controls the generator through the generator turn ON signal circuit. The ECM monitors the generator performance though the generator field duty cycle signal circuit. The signal is a pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–95 percent. Between 0–5 percent and 95–100 percent are for diagnostic purposes. The following table shows the commanded duty cycle and output voltage of the generator:

Commanded Duty Cycle	Generator Output Voltage
10%	11 V
20%	11.56 V
30%	12.12 V
40%	12.68 V
50%	13.25 V
60%	13.81 V
70%	14.37 V

80%	14.94 V
90%	15.5 V

The generator provides a feedback signal of the generator voltage output through the generator field duty cycle signal circuit to the ECM. This information is sent to the body control module (BCM). The signal is PWM signal of 128 Hz with a duty cycle of 0–100 percent. Normal duty cycle is between 5–99 percent. Between 0–5 percent and 100 percent are for diagnostic purposes.

Battery Sulfation Mode

The BCM will enter this mode when the interpreted generator output voltage is less than 13.2 V for 45 minutes. When this condition exists the BCM will enter Charge Mode for 2–3 minutes. The BCM will then determine which mode to enter depending on voltage requirements.

Charge Mode

The BCM will enter Charge Mode when ever one of the following conditions are met.

- The wipers are ON for more than 3 seconds.
- GMLAN (Climate Control Voltage Boost Mode Request) is true, as sensed by the HVAC control head. High speed cooling fan, rear defogger and HVAC high speed blower operation can cause the BCM to enter the Charge Mode.
- The estimated battery temperature is less than 0°C (32°F).
- Battery State of Charge is less than 80 percent.
- Vehicle speed is greater than 145 km/h (90 mph)
- Current sensor fault exists.
- System voltage was determined to be below 12.56 V

When any one of these conditions is met, the system will set targeted generator output voltage to a charging voltage between 13.9–15.5 V, depending on the battery state of charge and estimated battery temperature.

Fuel Economy Mode

The BCM will enter Fuel Economy Mode when the estimated battery temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 amperes and greater than −8 amperes, and the battery state-of-charge is greater than or equal to 80 percent. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5–13.1 V. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

Headlamp Mode

The BCM will enter Headlamp Mode when ever the headlamps are ON (high or low beams). Voltage will be regulated between 13.9–14.5 V.

Start Up Mode

When the engine is started the BCM sets a targeted generator output voltage of 14.5 V for 30 seconds.

Voltage Reduction Mode

The BCM will enter Voltage Reduction Mode when the calculated ambient air temperature is above 0°C (32°F). The calculated battery current is less than 1 ampere and greater than −7 amperes, and the generator field duty cycle is less than 99 percent. Its targeted generator output voltage is 12.9 V. The BCM will exit this mode once the criteria are met for Charge Mode.

Instrument Panel Cluster Operation

Charge Indicator Operation

The instrument panel cluster illuminates the charge indicator and displays a warning message in the driver information center if equipped, when the one or more of the following occurs:

- The engine control module (ECM) detects that the generator output is less than 11 V or greater than 16 V. The instrument panel cluster receives a GMLAN message from the ECM requesting illumination.
- The instrument panel cluster determines that the system voltage is less than 11 V or greater than 16 V for more than 30 seconds. The instrument panel cluster receives a GMLAN message from the body control module (BCM) indicating there is a system voltage range concern.
- The instrument panel cluster performs the displays test at the start of each ignition cycle. The indicator illuminates for approximately 3 seconds.

Display Message: BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM

The BCM and the ECM will send a serial data message to the driver information center for the BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is commanded ON when a charging system DTC is a current DTC. The message is turned OFF when the conditions for clearing the DTC have been met.

Electrical Power Management Description and Operation

Electrical Power Management

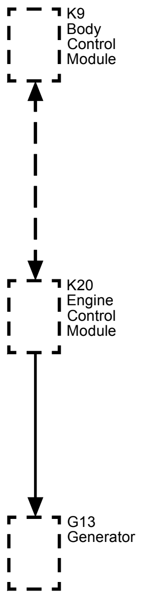
The electrical power management is used to monitor and control the charging system and alert the driver of possible problems within the charging system. The electrical power management system makes the most efficient use of the generator output, improves the battery state-of-charge, extends battery life, and manages system electrical loads.

The load shed operation is a means of reducing electrical loads during a low voltage or low battery state-of-charge condition.

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition.

Each electrical power management function, either idle boost or load shed, is activated in incremental steps. For example, idle boost 1 must be active before idle boost 2 can be active. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

Electrical Power Management Block Diagram



Idle Boost and Load Shed With Current Sensor

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Idle Boost 1 Start	Less Than −15°C (5°F)	Less Than 13 V	—	First level Idle boost requested
Idle Boost 1 Start	—	—	Battery has a net loss greater than 0.6 Ah	First level Idle boost requested
Idle Boost 1 Start	—	Less Than 11 V	—	First level Idle boost requested
Idle Boost 1 End	Greater Than −10°C (14°F)	Greater Than 12 V	Battery has a net loss less than 0.2 Ah	First level Idle boost request cancelled
Idle Boost 2 Start	—	—	Battery has a net loss greater than 1.6 Ah	Second level Idle boost requested
Idle Boost 2 Start	—	Less Than 11 V	—	Second level Idle boost requested

Idle Boost 2 End	—	Greater Than 12 V	Battery has a net loss less than 0.8 Ah	Second level Idle boost request cancelled
Load Shed 1 Start	—	—	Battery has a net loss of 4 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 End	—	Greater Than 12 V	Battery has a net loss of less than 2 Ah	Clear Load Shed 1
Idle Boost 3 Start	—	—	Battery has a net loss of 10 Ah	Third level Idle boost requested
Idle Boost 3 Start	—	Less Than 11 V	—	Third level Idle boost requested
Idle Boost 3 End	—	Greater Than 12 V	Battery has a net loss of less than 6.0 Ah	Third level Idle boost request cancelled
Load Shed 2 Start	—	—	Battery has a net loss greater than 12 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	—	Greater Than 12 V	Battery has a net loss of less than 8 Ah	Clear Load Shed 2
Load Shed 3 Start	—	Less Than 11.9 V	Battery has a net loss greater than 20 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 End	—	Greater Than 12.6 V	Battery has a net loss of less than 13 Ah	Clear Load Shed 3

Idle Boost and Load Shed Without Current Sensor (based on battery voltage)

Function	Battery Temperature Calculation	Battery Voltage Calculation	Action Taken
Idle Boost 1 Start	Less Than −15°C (5°F)	Less Than 13 V	First level Idle boost requested
Idle Boost 1 Start	—	Less Than 12.6 V	First level Idle boost requested
Idle Boost 1 End	Greater Than −15°C (5°F)	—	First level Idle boost request cancelled
Idle Boost 1 End	—	Greater Than 13 V	First level Idle boost request cancelled
Idle Boost 2 Start	—	Less Than 12.4 V	Second level Idle boost requested
Idle Boost 2 End	—	Greater Than 12.5 V	Second level Idle boost request cancelled
Load Shed 1 Start	—	Less Than 12.3 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 End	—	Greater Than 12.4 V	Clear Load Shed 1
Idle Boost 3 Start	—	Less Than 10 V	Third level Idle boost requested
Idle Boost 3 End	—	Greater Than 12.3 V	Third level Idle boost request cancelled
Load Shed 2 Start	—	Less Than 12.1 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	—	Greater Than 12.2 V	Clear Load Shed 2
Load Shed 3 Start	—	Less Than 11.9 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 End	—	Greater Than 12.0 V	Clear Load Shed 3

Starting System Description and Operation

The starter motors are non-repairable starter motors. They have pole pieces that are arranged around the armature. Both solenoid windings are energized. The pull-in winding circuit is completed to the ground through the starter motor. The windings work together magnetically to pull and hold in the plunger. The plunger moves the shift lever. This action causes the starter drive assembly to rotate on the armature shaft spline as it engages with the flywheel ring gear on the engine. Moving at the same time, the plunger also closes the solenoid switch contacts in the starter solenoid. Full battery voltage is applied directly to the starter motor and it cranks the engine.

As soon as the solenoid switch contacts close, current stops flowing thorough the pull-in winding because battery voltage is applied to both ends of the windings. The hold-in winding remains energized. Its magnetic field is strong enough to hold the plunger, shift lever, starter drive assembly, and solenoid switch contacts in place to continue cranking the engine. When the engine starts, pinion overrun protects the armature from excessive speed until the switch is opened.

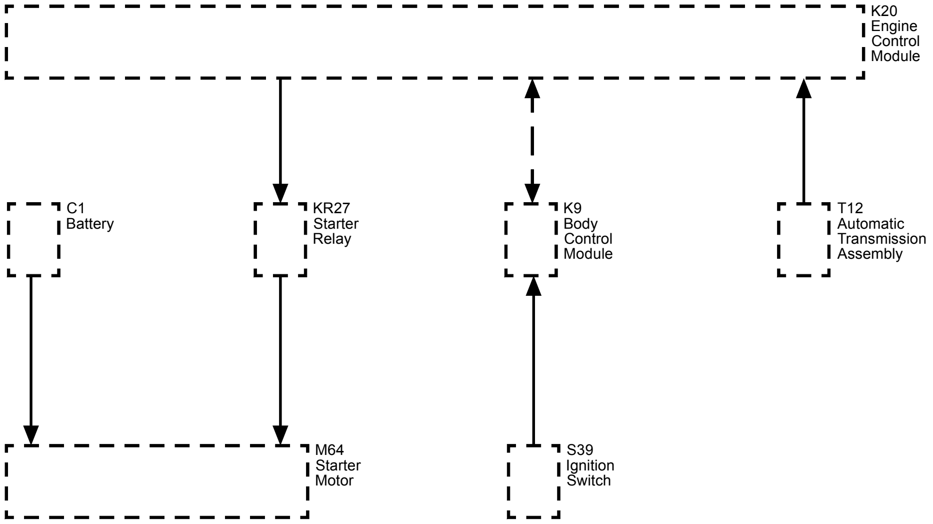
When the ignition switch is released from the START position, the START relay opens and battery voltage is removed from the starter solenoid S terminal. Current flows from the motor contacts through both windings to the ground at the end of the hold-in winding. However, the direction of the current flow through the pull-in winding is now opposite the direction of the current flow when the winding was first energized.

The magnetic fields of the pull-in and hold-in windings now oppose one another. This action of the windings, along with the help of the return spring, causes the starter drive assembly to disengage and the solenoid switch contacts to open simultaneously. As soon as the contacts open, the starter circuit is turned off.

Circuit Description (Key Start)

When the ignition switch is placed in the Start position, a discrete signal is supplied to the body control module (BCM) notifying it that the ignition is in the Start position. The BCM then sends a message to the engine control module (ECM) notifying it that CRANK has been requested. The ECM verifies that the transmission is in Park or Neutral. If it is, the ECM then supplies 12 V to the control circuit of the crank relay. When this occurs, battery positive voltage is supplied through the switch side of the crank relay to the S terminal of the starter solenoid.

Starting System Block Diagram



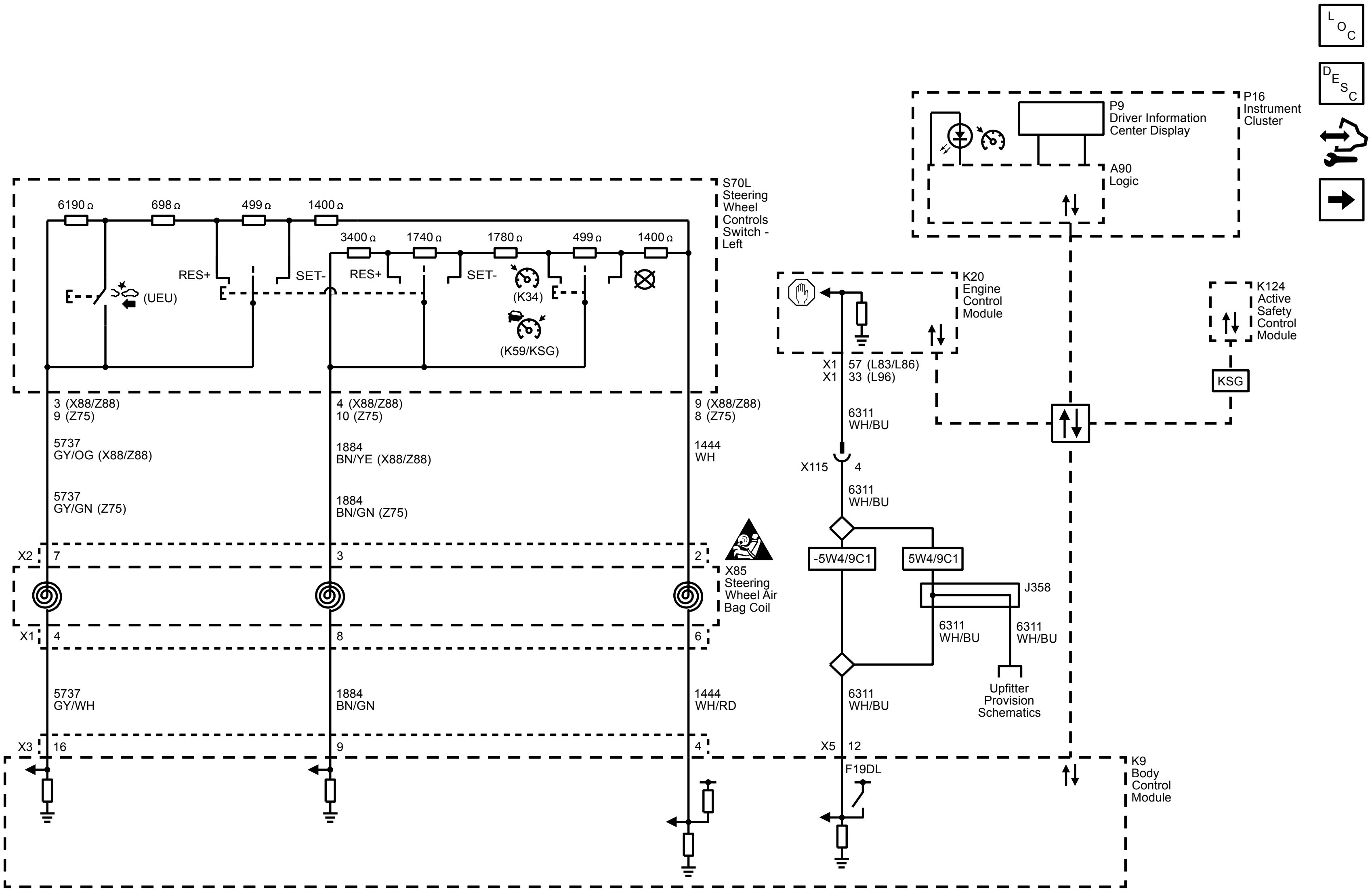
Engine/Propulsion

Cruise Control

Schematic and Routing Diagrams

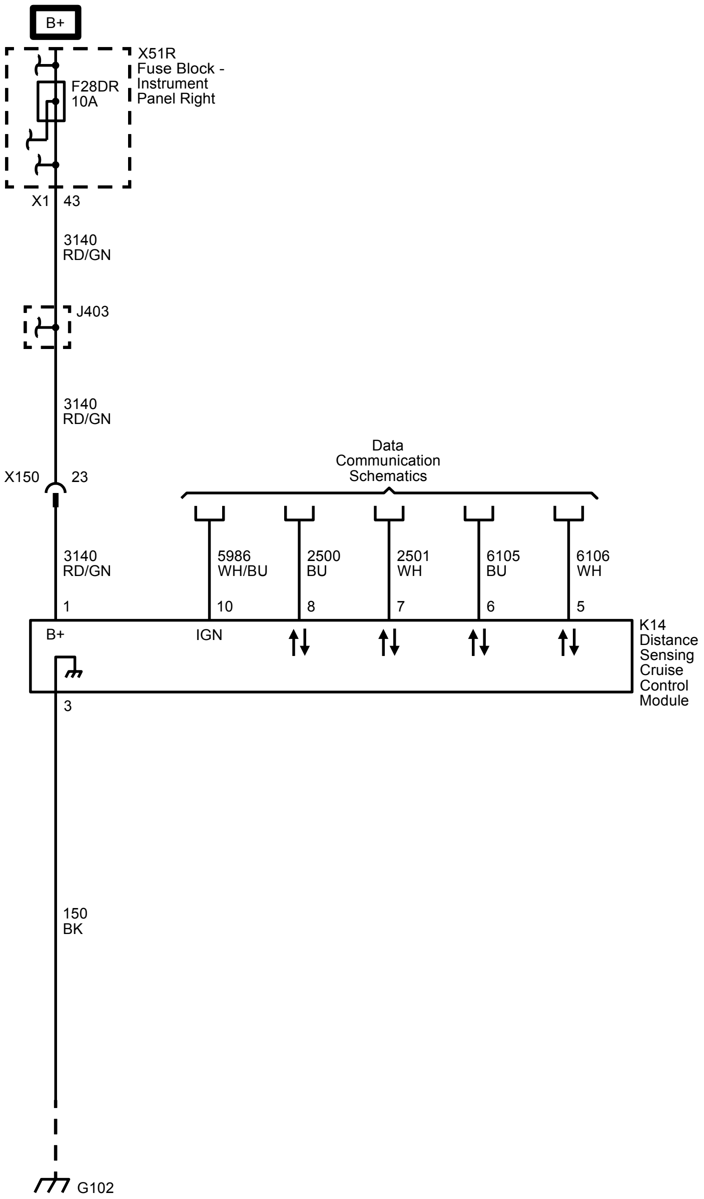
Cruise Control Schematics

Cruise Control



L O C
D E S C
P16 Instrument Cluster
P9 Driver Information Center Display
A90 Logic
S70L Steering Wheel Controls Switch - Left
6190 Ω
698 Ω
499 Ω
1400 Ω
3400 Ω
1740 Ω
1780 Ω
499 Ω
1400 Ω
RES+
SET-
RES+
SET-
(UEU)
(K34)
(K59/KSG)
K20 Engine Control Module
X1 57 (L83/L86)
X1 33 (L96)
K124 Active Safety Control Module
KSG
3 (X88/Z88)
9 (Z75)
5737 GY/OG (X88/Z88)
5737 GY/GN (Z75)
4 (X88/Z88)
10 (Z75)
1884 BN/YE (X88/Z88)
1884 BN/GN (Z75)
9 (X88/Z88)
8 (Z75)
1444 WH
6311 WH/BU
X115 4
6311 WH/BU
X2 7
3
2
X85 Steering Wheel Air Bag Coil
-5W4/9C1
5W4/9C1
J358
6311 WH/BU
6311 WH/BU
Upfitter Provision Schematics
X1 4
8
6
5737 GY/WH
1884 BN/GN
1444 WH/RD
6311 WH/BU
X3 16
9
4
X5 12
F19DL
K9 Body Control Module

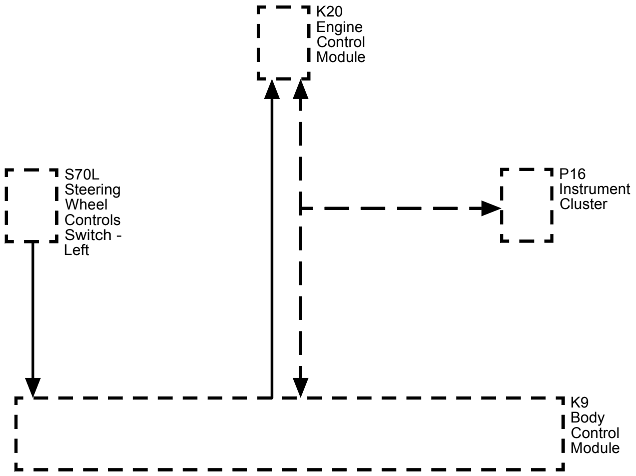
Adaptive Cruise Module (K59)


B+
X51R
Fuse Block -
Instrument
Panel Right
F28DR
10A
X1
43
3140
RD/GN
J403
3140
RD/GN
X150
23
Data
Communication
Schematics
3140
RD/GN
5986
WH/BU
2500
BU
2501
WH
6105
BU
6106
WH
1
10
8
7
6
5
B+
IGN
K14
Distance
Sensing
Cruise
Control
Module
3
150
BK
G102

Description and Operation

Cruise Control Description and Operation

Cruise Control System Block Diagram



Cruise control is a speed control system that maintains a desired vehicle speed under normal driving conditions at speeds above 40 km/h (25 mph). Steep grades may cause variations in the selected vehicle speeds.

The following are the main components of the Cruise Control System:

- The accelerator pedal
- The brake pedal position (BPP) sensor
- The body control module (BCM)
- The cruise on/off switch
- The cruise control cancel switch
- The + RES switch (equivalent to resume/accelerate switch)
- The − SET switch (equivalent to set/coast switch)
- The engine control module (ECM)
- The throttle actuator control (TAC) motor (gasoline engines only)
- The vehicle speed sensor

The body control module (BCM) monitors the signal circuit of the cruise control switches, which are located on the steering wheel. The BCM relays the cruise control switch status to the engine control module (ECM) via the serial data circuit. The ECM uses the status of the cruise control switch to determine when to capture and maintain the vehicle speed. The ECM monitors the vehicle speed signal circuit in order to determine the desired vehicle speed.

Voltage is supplied to the cruise control switch via the steering wheel control switch reference voltage circuit supplied by the BCM. The cruise control function switches are arranged in a resistive ladder design, with each cruise control function switch having a different resistance value. The BCM detects a specific voltage value that is associated with the cruise control function switch being activated. The BCM sends a serial data message to the ECM indicating that the on/off switch is active. Similarly, when the normally open + RES switch or the normally open − SET switch are pressed, the switch closes and the BCM detects the predetermined voltage signal on the cruise control resume/accel and set/coast switch signal circuit. The BCM sends a serial data message to the ECM indicating that the + RES switch or the − SET switch is active.

Cruise Control Engaged

The Cruise Control System will engage and adjust vehicle speeds, based on the activation of the following cruise control switches, which are located on the steering wheel:

- On/Off

- + RES
- − SET

To engage the Cruise Control System, ensure that the vehicle speed is above 40.2 km/h (25 mph), turn the cruise On/Off switch ON and momentarily press the − SET switch. The ECM will engage the Cruise Control System and record the vehicle speed. The ECM sends a serial data message to the instrument panel cluster (IPC) in order to illuminate the Cruise Engaged indicator in the IPC. Refer to the vehicle owner’s manual for the location and operation of the cruise control On/Off indicators and driver information center (DIC) messages.

Pressing the accelerator pedal while the Cruise Control System is engaged, allows the driver to override the Cruise Control System in order to accelerate the vehicle beyond the current set vehicle speed. When the accelerator pedal is released, the vehicle will decelerate and resume the current set vehicle speed.

The driver can also override the current set vehicle speed via the − SET switch and the + RES switch. When the Cruise Control System is engaged, pressing and holding the − SET switch will allow the vehicle to decelerate from the current set vehicle speed without deactivating the Cruise Control System. When the − SET switch is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the Cruise Control System is engaged, momentarily pressing the − SET switch will allow the vehicle to decelerate at a vehicle specific calibratable increment, commonly 1.6 km/h (1 mph), each time that the − SET is momentarily pressed, with a minimum vehicle speed of 38 km/h (24 mph). Refer to the vehicle Owner’s Manual for more information.

Pressing and holding the + RES switch, when the Cruise Control System is engaged, will allow the vehicle to accelerate to a greater vehicle speed than the current set vehicle speed. When the + RES switch is released, the ECM will record the vehicle speed and maintain the vehicle speed as the new set vehicle speed. When the Cruise Control System is engaged, momentarily pressing the + RES switch will allow the vehicle to accelerate at a vehicle specific calibratable increment, commonly 1.6 km/h (1 mph), each time that the + RES switch is momentarily pressed. Momentarily activating the + RES switch will recall the previous vehicle speed, after the cruise control system has been disengaged by pressing the brake pedal, or CANCEL switch. Refer to the vehicle Owner’s Manual for more information.

Cruise Control Disengaged

The engine control module (ECM) disengages the cruise control operation based on the signals from the following switches:

- The brake pedal position (BPP) sensor
- The On/Off switch
- The cruise control cancel switch

The Cruise Control System will disengage when the brake pedal is applied. The body control module (BCM) monitors the BPP sensor via the BPP sensor signal circuit as the voltage signal increases while the pedal is further applied. The ECM monitors the BPP signal through a discrete input and a serial data message signal from the BCM indicating the brake status. When either signal indicates the brake pedal is applied, the ECM will disengage the cruise control system.

The Cruise Control System will also disengage when the cruise control on/off switch is switched OFF, or the cruise control cancel switch is activated. The body control module (BCM) determines when the cruise control cancel switch is activated. When the normally open cancel switch is closed, the BCM detects the predetermined voltage signal on the cruise control function switch circuit. The vehicle speed stored in the memory of the engine control module will be erased when the cruise control On/Off switch is turned OFF, or the ignition switch is turned OFF. The BCM sends a serial data message to the ECM in order to disengage the cruise control system. When the Cruise Control System has been disengaged, the ECM sends a serial message to the instrument panel cluster (IPC) in order to turn OFF the Cruise Engaged indicator.

Every time the Cruise Control System is disengaged, the ECM will keep track of the reason for system disengagement. The last 8 disengagement reasons will be recorded within the ECM memory. The scan tool will display the last 8 Cruise Disengage History parameters, in which one out of approximately 50 possible reasons will be displayed in each of these 8 parameters. For the disengagement reason to be displayed within the scan tool parameter the Cruise Control System is active and disengagement is requested.

When engagement of the system is requested but an engagement inhibit is present, the most recent inhibit reason is recorded in the ECM history. The scan tool will display the most recent inhibit reason, in which one out of approximately 50 possible reasons will be displayed.

Cruise Control Inhibited

The engine control module (ECM) inhibits the cruise control operation when any of the following conditions exist:

- The ECM has not detected a brake pedal activation from the body control module (BCM) this ignition cycle.
- A Cruise Control System DTC has been set.
- The vehicle speed is less than 38.6 km/h (24 mph).
- The vehicle speed is too high.
- The vehicle is in PARK, REVERSE, NEUTRAL, or 1st gear.
- The engine RPM is low.
- The engine RPM is high.
- The system voltage is not between 9 volts and 16 volts.
- The Antilock Brake System (ABS)/Traction Control System (TCS) is active for more than a calibratable time (typically 0.3 to 0.7 seconds).

Cruise Control Inhibit Reasons

This is a general list of inhibit reasons. Not every inhibit reason is applicable to all vehicles. Refer to the scan tool inhibit reason list for the last 8 reasons that have been recorded during the current ignition cycle.

Scan Tool Name	Description	Long Description
ACC BRAKE INOP	Adaptive Cruise Control Automatic Braking Failed	Adaptive Cruise Control Automatic Braking Inoperative

ACC DATA	Serial data fault for Adaptive Cruise Control Throttle Control and Brake Control signals sent by Adaptive Cruise Control module	Adaptive Cruise Control Module serial data fault is active or communication has been lost between ACC module and ECM.
ACC INHIBIT	Adaptive Cruise Control Inhibited	Adaptive Cruise Control Inhibited
ACC OPTION	Adaptive Cruise Control option mismatch	Cruise control type (adaptive cruise or conventional cruise) mismatched between ECM and BCM.
ACCEL RATE	High acceleration	Vehicle acceleration rate is too high.
ACCEL Time	Rate Limiting Fault	Cruise torque request rate limiting active too long
APP OVERRIDE	Pedal greater than cruise (override)	Driver has overridden cruise control set speed with accelerator pedal for greater than an allowable time.
Auto Brk Data	Automatic Braking Engine Torque Request Signal Communication Malfunction	ECM to EBCM serial data fault is active or communication has been lost between ECM and EBCM.
AXLE RANGE	Rear Axle Low	Rear axle in low range
BPP DATA	DTC P0703 active or maximum time elapsed without receiving valid Brake Pedal Position signal.	Serial data fault is active or communication has been lost with module sending brake pedal apply state
BPP DTC	Brake Pedal Position signal invalid	Brake Pedal Apply Circuit fault has been detected.
BPP Not Learned	Brake Apply Sensor Home Position Not Learned	Brake Pedal Position Sensor Released Position Not Learned.
BRAKE	Brake pedal apply	Brake Pedal was applied.
Brk Ped Press	Brake Pedal Driver Applied Pressure Detected	A Brake Pedal Apply has been detected based on brake pedal pressure as measured by the EBCM.
Calc Eng Torque	Calculated Torque	Engine torque calculation is incorrect.
CANCEL	Cancel switch active	Cancel Switch was depressed.
CLUTCH	Clutch switch active	Clutch Pedal was applied.
COAST DISENGAGE	Coast disengage	Cruise control is in coast mode with the Set/Coast switch depressed and is requesting no throttle
COAST SPEED LOW	Coast below low speed inhibit	Set / Coast switch was depressed. Vehicle slowed below minimum cruise operating speed.
Cruise Brk Inop	Brake System Malfunction	EBCM has detected a failure that does not allow automatic braking to be performed.
CRUISE S/W	Sequence of completion checks	Cruise control software execution error has occurred.
CRUISE SW DATA	Serial data fault (Cruise switch serial communication fault)	Cruise switch serial data fault is active or communication has been lost with module sending cruise switch states
CRUISE SW. OFF	On/Off switch in Off state	Cruise On/Off switch turned Off
DECEL RATE	High deceleration	Vehicle deceleration rate is too high.
DLC OVERRIDE	ALDL	Scan Tool plugged into ALDL connector

DTC SET	Malfunction in PCM/ECM (DTC active)	DTC is active or in history that inhibits cruise control operation.
D WHL SPD HI	Driven Whl Spd Greater (wheel slip detection)	Driven wheel speed greater than Non Driven wheel speed (slip detection)
D WHL SPD LOW	Un-driven Whl speed Greater	Non Driven wheel speed greater than driven wheel speed
ECM INHIBIT	PCM/ECM inhibit (RAM corruption)	ECM internal communication error
ECM RESET	ECM Running Reset	ECM Running Reset occurred
ECT OVERTEMP	Engine metal overtemp active	Engine over temperature. Overheated.
ENG RUN TIME	Engine run time not elapsed	Engine has not been running long enough, typically five seconds.
ENGINE SPEED	Engine speed too low or too high	Engine RPM too low (near stall) or too high (near engine RPM fuel shutoff).
FIRST GEAR	1st Gear	Transmission is engaged in 1st gear
HIGH SPEED	Vehicle speed exceeds high speed threshold	Vehicle speed has exceeded maximum cruise operating speed
HIGH VOLTAGE	Voltage above high voltage threshold	Ignition Voltage High at ECM (typically 18 volts)
ILLEGAL MODE	Illegal cruise mode	Cruise control mode is incorrect based on switch states.
LOST FWD GEAR	Transmission in neutral. Reverse or park	Gear selector not in forward gear
LOW SPEED	Vehicle speed drops below low speed threshold	Vehicle speed dropped below the cruise control minimum operating speed. May be due to hilly terrain and low vehicle speed. Manual transmission gear selection and engine torque may contribute to this disengagement reason.
LOW VOLTAGE	Voltage below low voltage threshold	Ignition Voltage Low at ECM (typically 9 volts)
MEMORY DTC	Memory Failure	Control module memory failure detected.
MPH LIMIT	MPH Limited Fuel (Vehicle overspeed fuel cut-off active)	Vehicle overspeed protection active with fuel cut off active
M/T Gear Changed	Manual transmission out of gear with no clutch pedal apply	Manual transmission shifted to Neutral without clutch pedal being applied.
NONE	None	This disengagement reason may be displayed after a dead battery repair or module replacement.
OVER SET SPEED	Over schedule	Vehicle speed has exceeded driver selected set speed by more than an allowable amount. This may occur while driving down a significant grade or driver overriding cruise while performing a passing maneuver.
PARK BRAKE	Park Brake Switch signal Active	Parking Brake Applied

PEDAL INITIALIZE	Brake before cruise	The brake pedal has not been seen as applied prior to driver request to engage cruise with set switch. A brake pedal apply must be seen before allowing cruise engagement during each key cycle. On a vehicle equipped with a manual transmission, a clutch pedal apply may satisfy the brake pedal apply criteria.
PTO ACTIVE	Power Take Off Active	Power Take Off is active.
Ram DTC	Processor Integrity Fault (Ram corruption)	ECM software error has occurred
RPM LIMIT	Injectors Disabled (Engine overspeed fuel cut-off active)	Engine RPM limiter active with fuel cut off active.
S/C ON SPEED HI	Over schedule tap-down	Set/Coast switch selected, vehicle speed is above set speed and does not decrease. May be due to traveling down hill
SIMUL S/C-R/A	SET and RESUME switches simultaneously active	Set/Coast and Resume Accelerate switches pressed simultaneously
SL/W Sys On	Speed Limiter / Warning On/Off switch turned on	Driver has turned on the Speed Limiter/Warning on/off switch. Cruise is disabled / inhibited and cruise on/off switch will be set to OFF.
SW. INVALID	Analog cruise switch input out of range	Cruise switch voltage signal in invalid range
TAC INHIBIT	ETC prevents cruise operation	Electronic Throttle Control has detected a failure in the throttle control hardware
TCS	Traction control active	Traction Control was Active
TRANS DTC	Trans Gear Fault	Transmission DTC is active or in history that inhibits cruise control operation
UNDER SET SPEED	Under schedule	Vehicle speed is below cruise control set speed by more than an allowable amount
VSES	Vehicle stability active	Vehicle Stability Control was active
4WD Low	4WD Low	Transfer case in low range

Cruise Control Description and Operation (Adaptive Cruise Control)

Adaptive Cruise Control (ACC)

The Adaptive Cruise Control System (ACC) is an enhanced Cruise Control System with the ability to sense and react to forward traffic. Compared to the common Cruise Control System found on many vehicles, the main functional enhancement of the ACC System is the ability to detect the presence of a vehicle in the path of the ACC vehicle. The ACC retains the existing cruise control feature that controls the vehicle speed to the driver selected speed. However, ACC allows a driver to set and maintain a following distance to the preceding nearest vehicle in the ACC vehicle path. The cruise control vehicle distance sensor module calculates a follow speed limit to ensure an acceptable distance is maintained to the preceding vehicle in front, should one be present. The ACC System automatically adjusts the speed of an ACC vehicle when the vehicle comes up behind a slower travelling vehicle in front. The ACC System applies limited automatic braking and throttle control without driver input when necessary to maintain the set following distance of the ACC vehicle. The preceding vehicle's speed and acceleration along with the ACC vehicle speed and acceleration and the distance between the two vehicles are factors used by the cruise control vehicle distance sensor module to determine the ACC follow speed limit. The ACC vehicle speeds up to the original driver selected set speed when the pathway becomes clear without driver input.

Adaptive Cruise Control (ACC) System Description

The Adaptive Cruise Control (ACC) System depends on various modules on the vehicle to function and each module performs a function that is critical to the proper operation of the ACC System. ACC will not operate if any components fail. Communication between modules is via the High-Speed GMLAN serial data circuit. The GMLAN utilizes the controller area network (CAN) communications protocol. The following is a functional description of the cruise control vehicle distance sensor module and the other associated components:

Cruise Control Vehicle Distance Sensor Module

The cruise control vehicle distance sensor module contains the radar and the controller. The cruise control vehicle distance sensor module utilizes the radar to identify and classify objects in the road environment. The radar scans the road environment to detect targets within its specified field of view. The controller then makes throttle and/or brake commands to the engine control module (ECM) and electronic brake control module (EBCM) via the GMLAN serial data circuit in order to control the vehicle acceleration/deceleration based on the data from the radar. The ECM and EBCM provide throttle control and automatic braking needed for proper cruise speed adjustment. The following is a list of the cruise control vehicle distance sensor module functions:

- The radar processes the road environment to get data concerning any vehicle ahead of the ACC vehicle. Detection, parameter estimation, tracking, object classification and diagnostics are the primary radar functions. When an object is detected, the controller calculates the object range, range rate, acceleration and azimuth angle parameters.
- The cruise control vehicle distance sensor module performs ACC state processing automatically – distance control or speed control. The ACC System operates in 2 possible states – Cruise or Follow. The normal operating state is Cruise, whereby the vehicle speed is controlled to match the driver selected set speed. When a preceding forward target is identified by the radar, the ACC System will automatically transition into the follow speed state to provide proper lane spacing behind the target vehicle in front. The preceding vehicle's speed and acceleration, with the ACC vehicle speed, acceleration and distance between the two vehicles will be used to determine the ACC follow speed limit. The ACC follow speed limit will ensure that an acceptable distance is maintained to the preceding vehicle.
- The cruise control vehicle distance sensor module determines the follow speed limit for throttle control by the ECM.
- The cruise control vehicle distance sensor module arbitrates the ACC System brake and throttle control between the EBCM and the ECM.
- The cruise control vehicle distance sensor module requests brake light activation during automatic braking.
- The cruise control vehicle distance sensor module provides operational feedback to the vehicle driver. The cruise control vehicle distance sensor module sends signals for telltales and messages to be displayed on the instrument cluster or driver information center.

Body Control Module (BCM)

The following are the ACC System functions provided by the BCM:

- The BCM provides a translating gateway for the high speed GMLAN serial data circuit.
- The BCM reads all cruise control switches and the gap switch. The cruise control vehicle distance sensor module monitors a variety of user operated switches from the BCM switch status information sent via the GMLAN serial data circuit.
- The BCM illuminates the brake light based on a GMLAN message from the cruise control vehicle distance sensor module during automatic braking.
- The BCM measures the brake pedal position and sends brake pedal travel status via GMLAN serial data circuit to the ECM. The ECM disengages the ACC System when the brake is applied by the driver pressing the brake pedal.
- The BCM serves as a gateway to the instrument cluster and driver information center. The BCM will generate visual warnings based on high speed GMLAN serial data messages from the cruise control vehicle distance sensor module.

Engine Control Module (ECM)

The following are the ACC System functions performed by the ECM:

- The ECM provides the electronic throttle control to the ACC System. The ECM is also responsible for determining when a driver is overriding the adaptive cruise control throttle position by pressing the accelerator pedal.
- The ECM processes the cruise control switch requests received via the GMLAN serial data circuit from the BCM. Engaging and disengaging the ACC System are functions performed by the ECM.
- The ECM determines the driver selected vehicle speed. Unless the ACC module requests a lower vehicle speed, the ECM will control the vehicle speed to the driver selected set speed.
- The ECM allows automatic braking without disengaging the ACC.

Antilock Brake System (ABS)

The following are the ACC System functions performed by the EBCM:

- The EBCM controls the operation of the Antilock Brake System.
- The EBCM provides automatic braking for the ACC System. The cruise control vehicle distance sensor module will request vehicle deceleration via high speed GMLAN serial data circuit.
- The EBCM determines when the driver–applied brake pressure is active. The EBCM will communicate this status via the GMLAN serial data circuit to the BCM.
- The EBCM releases vehicle automatic braking when there is a throttle override by the driver pressing the accelerator.

- The EBCM predicts brake temperatures. Due to automatic braking, the brake system may overheat. When the brakes are overheated, the EBCM requests the ACC System to be temporarily shut down by the ECM until the brakes cool to a normal operating temperature.

Transmission Control Module (TCM)

The transmission control module (TCM) provides a down shift to protect the brakes. When the TCM detects some driver braking activity or ACC automatic braking activity, the TCM down shifts the vehicle transmission to increase engine braking. This helps reduce braking activity, extend brake pad life and reduce brake system overheating.

Driver Information Center

The driver information center is a part of the instrument cluster and displays the ACC System warning messages. The cruise control vehicle distance sensor module requests messages to be displayed on the driver information center by sending a GMLAN request to the BCM. The BCM sends a GMLAN serial data request to the instrument cluster demanding the display of the warning message. When the message is acknowledged by the driver and the cause of the message resolved, the driver information center turns the message off. The ACC System will not operate if the driver information center fails. The following are the ACC messages that can be displayed on the driver information center:

- Service ACC
- Front Radar Blocked Clean Front of Vehicle

Brake Pedal Position Sensor

The BCM monitors the brake pedal position sensor in order to determine when pressure is being applied to the brake by the driver stepping on the brake pedal. The brake pedal position sensor receives a low reference signal and a 5 V reference from the BCM. When the brake is applied, a signal is applied from the brake pedal position sensor through the brake pedal position sensor signal circuit to the BCM. The BCM utilizes this signal in deciding when to command the activation of the stop lamps. The BCM continuously sends signals via the GMLAN serial data circuit to the EBCM and the ECM reflecting the brake pedal position status. This will include the initial brake travel signal required for the activation of the ACC System. The ACC System will not engage unless the initial brake pedal travel signal is valid and received by the BCM. When the BCM brake pedal position signal indicates that brake pedal pressure is being applied by the driver when the ACC System is engaged, the ECM immediately disengages the ACC System. Re-engaging the ACC System will require the driver pressing the set or resume switch. Refer to CELL Link Error - Link target cell (cell ID 135694) is invalid for this publication. and to Exterior Lighting Systems Description and Operation for more information on the brake pedal pressure sensor.

Accelerator Pedal

Deceleration of the ACC vehicle to maintain a certain distance and speed while a slower moving vehicle is in its path is achieved through throttle control by the ECM and the application of light automatic braking by the EBCM. During automatic braking the ECM is commanded to release the throttle from the currently controlled cruise position by the cruise control vehicle distance sensor module. At the end of automatic braking, the ECM will control the vehicle speed to the current set vehicle speed. Driver throttle override occurs when the driver of the ACC vehicle depresses the accelerator pedal with the intention of requesting greater speed than the current throttle position. An example is an ACC vehicle driver stepping on the accelerator for a passing maneuver. The ECM continuously monitors the throttle and reports a throttle override condition. When no throttle override is present, automatic braking is allowed. When throttle override is detected by the ECM, automatic braking in not allowed to affect the vehicle acceleration.

Cruise Control Switch

The cruise control switch, functionally is a common feature that is shared between the Adaptive Cruise Control (ACC) System and the regular Cruise Control System. The ACC System will not operate if any cruise switch fails. The cruise control switch comprises the following cruise control function switches:

- On/Off switch
- Set/decrease switch
- Resume/increase switch

The cruise control function switches are arranged in a resistive ladder design whereby each switch function is set up with different resistance values. The BCM through the cruise control switch signal circuit detects a predetermined voltage value when any cruise control switch function is activated. The associated cruise control function signal detected by the BCM is then sent to the engine control module (ECM) as a GMLAN serial data circuit message. The ECM on receiving the message provides the cruise control function requested by the BCM. The ECM is responsible for recognizing and responding to cruise control switch requests sent by the BCM. The cruise control function switches are used by the ECM to communicate to the cruise control vehicle distance sensor module the driver selected vehicle speed. The driver selected vehicle speed is communicated through GMLAN serial data circuit to the cruise control vehicle distance sensor module and the BCM. The ACC System engages and adjusts vehicle speeds based on the activation of the following cruise control function switches:

On/Off Switch

The BCM monitors the switch signal circuit in order to determine when the On/Off switch is disabled or activated. The BCM detects a predetermined voltage value on the switch signal circuit. The On/Off switch state is then relayed to the ECM via the GMLAN serial data circuit. The ECM sends the On/Off switch input status to the cruise control vehicle distance sensor module. When the On/Off switch is turned ON, the ACC System enters either a standby enabled or a standby disabled mode. The standby enabled mode indicates that every condition required for the ACC System to function has been met, but the ACC is not engaged. When the ACC is in the standby disabled mode, the conditions necessary for the ACC System to function has not been met. When the On/Off switch is turned OFF, the ACC will enter the disabled mode. The ACC will not activate in the disabled mode.

Set/Decrease Switch

The ACC System is engaged when the ACC On/Off switch is turned ON and the set/decrease switch is momentarily pressed and released . When the set/decrease switch is pressed, the selected vehicle speed is set to the current vehicle speed by the ECM. The vehicle speed must be at or greater than 40 km/h (25 MPH). The selected vehicle speed is displayed by the driver information center. While in the engaged state, the selected vehicle speed and the following distance can be adjusted. Pressing and holding the set/decrease switch, when the ACC System is engaged, will decrease the selected vehicle speed without deactivating the ACC. Momentarily pressing and releasing the set/decrease switch, when the adaptive cruise control is engaged, will decrease the vehicle speed by a calibrated amount. Refer to the vehicle Owner’s Manual for the specific amount of speed reduction for each switch press.

Resume/Increase Switch

The resume/increase switch is used in order to increase the selected vehicle speed when ACC is active. The amount selected vehicle speed can be increased from the resume/increase switch depends on how long the switch is pressed. The presence of a slower moving vehicle in the path of the ACC vehicle will limit the extent to which the selected vehicle speed can be achieved. If there is no preceding vehicle in front, limiting the ACC vehicle acceleration, then the vehicle speed that is attained is the new selected vehicle speed. The current selected vehicle speed is displayed by the driver information center. Acceleration is terminated when the resume/increase switch is released. Momentarily pressing and releasing the resume/increase switch, when the adaptive cruise control is engaged, will increase the vehicle speed by a calibrated amount. Refer to the vehicle Owner’s Manual for the specific amount of speed increase for each switch press.

Gap Switch

The gap switch allows the driver to determine how closely the adaptive cruise control (ACC) vehicle follows a target vehicle while ACC is engaged. When the ACC vehicle speed is being limited due to a slower travelling vehicle, the ACC vehicle speed is automatically controlled to the follow speed limit. The gap switch has 3 following distance selections that range from 1–2 s. The gap switch following distance between the ACC vehicle and the target vehicle is expressed in time as opposed to actual distance. The distance maintained for a selected gap will vary based on vehicle speed. The faster the vehicle speed, the further back you will follow. The gap setting can only be adjusted when the ACC System is engaged. The gap switch is hard-wired to the BCM. Based on voltage variations, the BCM is able to read the gap switch selection and communicates the switch status on the GMLAN serial data circuit to the cruise control vehicle distance sensor module. The gap switch is a momentary switch.

The initial push of the gap switch recalls the current setting and activates the display. Subsequent pushes of the gap switch will change the gap setting.

Cruise Indicators and Messages

SERVICE ACC

The cruise control vehicle distance sensor module commands the display of the SERVICE ACC message in the driver information center when it detects a malfunction in the Adaptive cruise control (ACC) System. The cruise control vehicle distance sensor module sends a request to the instrument cluster via the GMLAN serial data circuit to display the SERVICE ACC message in the driver information center. The SERVICE ACC is displayed in the driver information center only when a diagnostic condition is present. When the message is displayed in the driver information center the ACC System disengages.

FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE

The FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE message displays in the driver information center when the cruise control vehicle distance sensor module detects a blockage of the radar. The radar may be blocked by snow, ice, dirt, heavy rain or road spray. In rare instances, a vertically misaligned radar may trigger the activation of the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE message in the driver information center. The cruise control vehicle distance sensor module commands the display of the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE message via a GMLAN serial data circuit request to the instrument cluster. When the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE message is displayed in the driver information center, safely park the vehicle and turn OFF the ignition. Clean the front fascia cover to eliminate the blockage. It may also be necessary to clean both the outside surface of the cover, the inside surface of the cover and the cruise control vehicle distance sensor module surface. It is important to turn the ignition OFF before cleaning any of the named surfaces. This is because the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE message may still display in the driver information center after cleaning the three surfaces. Cycling the ignition to OFF for 10 s is necessary to clear the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE indicator if the indicator remains ON in the driver information center. If the FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE indicator still remains ON after cleaning the radar and cycling the ignition, then the radar alignment will need to be checked and verified. Perform the CELL Link Error - Link target cell (cell ID 226428) is invalid for this publication. , if the radar is misaligned.

Cruise Engaged Indicator

The ACC engaged indicator is displayed in the instrument cluster when the ACC is engaged by pressing the set/decrease switch. When the set/decrease switch is pressed by the driver, the BCM forwards the switch state to the engine control module (ECM) over the GMLAN serial data circuit. The ECM will use the switch input information from the BCM to determine the driver intended vehicle speed. The ECM communicates to the cruise control vehicle distance sensor module over the GMLAN serial data circuit the ACC engaged state and the driver selected speed. When the cruise control vehicle distance sensor module receives the ECM message indicating that ACC is active, the cruise control vehicle distance sensor module commands the display of the ACC engaged indicator via a GMLAN serial data message to the instrument cluster.

Set Speed

The ACC vehicle set speed is displayed at all times in the driver information center when ACC is engaged. The cruise control vehicle distance sensor module set speed display request is sent to the instrument cluster via the GMLAN serial data circuit.

Follow Distance

The driver information center displays the driver selected following distance when ACC is engaged and the gap switch is active. The current follow distance setting is displayed in the driver information center for a few seconds after the gap switch is pressed to increase or decrease the following distance. The cruise control vehicle distance sensor module follow distance display request is sent to the instrument cluster via the GMLAN serial data circuit.

Vehicle Ahead Indicator

The vehicle ahead indicator is displayed in the instrument cluster hen the radar identifies an in-path vehicle. The vehicle ahead indicator is a warning to the driver that a vehicle is ahead. The indicator also serves as a feedback to the driver that the radar is functioning properly. The cruise control vehicle distance sensor module commands the display of the vehicle ahead indicator via a GMLAN serial data message to the instrument cluster. The vehicle ahead indicator only displays with the ACC active and may sometimes display for stationary road objects.

Cruise Engaged

The Adaptive Cruise Control (ACC) System will engage and adjust vehicle speeds based on the activation of the following cruise switches:

- On/off
- Set/decrease
- Resume/increase

ACC will not engage if any inhibit criteria is active. Also, the driver must step on the brakes at each ignition cycle before attempting to engage ACC. The engine control module (ECM) looks to the BCM for the brake initial travel achieved signal indicating that the driver has stepped on the brakes before attempting to engage ACC.

The vehicle speed must be above 45 km/h (28 MPH) and below 190 km/h (118 MPH) for the ACC System to be engaged. In the engaged state, the ACC System allows the driver to override the controlled vehicle speed temporarily while still remaining in the engaged state.

Cruise Inhibited

Cruise Control Vehicle Distance Sensor Module Inhibits

The cruise control vehicle distance sensor module inhibits the Adaptive Cruise Control (ACC) System when any of the following conditions exists:

- The SERVICE ACC message is active in the driver information center.
- Initial brake pedal travel signal from brake pedal position sensor is not present
- An ACC System malfunction and/or failure is present.
- The FRONT RADAR BLOCKED CLEAN FRONT of VEHICLE indicator is active in the driver information center.
- An invalid vehicle speed
- The Antilock Brake System (ABS) is active during automatic braking.
- The Cruise Switch failed message from the BCM is sent to the cruise control vehicle distance sensor module.
- Automatic braking failure – A GMLAN signal from the electronic brake control module (EBCM) the to cruise control vehicle distance sensor module indicating an automatic braking failure

- The brakes overheated signal from ABS
- The cruise control vehicle distance sensor module transceiver temperature is hot.
- The driver applied brake pressure.

ECM Inhibits

The ECM inhibits the ACC System operation when any of the following conditions exists:

- The ACC inhibited signal from cruise control vehicle distance sensor module is present.
- The vehicle speed is less than 45 km/h (28 MPH).
- The vehicle speed is greater than 190 km/h (118 MPH).
- Automatic braking failure – A GMLAN signal from EBCM to the ECM indicating an automatic braking failure
- The ACC present signal from the BCM is false.
- The driver applied brake pressure.
- A cruise control switch failure is present.
- The park brake switch signal from the IPM is active.
- A Throttle Actuator Control System failure is present.
- The Traction Control System is active.
- The ABS is active.
- The engine speed protection is active.
- The vehicle speed protection is active.
- The engine speed is too high or too low.
- The automatic transmission is in first gear, Park, Neutral or Reverse.
- The initial brake pedal travel signal from the brake pedal position sensor is not present.
- The system voltage is too low.

Cruise Disengaged

The Adaptive Cruise Control (ACC) System disengages when any of the following occurs:

- The driver depresses the brake pedal.
- The driver turns the ACC On/Off switch OFF.

Pressing the brake pedal while the ACC is engaged will disengage the ACC System.

Other Adaptive Cruise Control (ACC) Features

Mechanical Alignment

When the radar is out of alignment, DTC C1002 is set by the cruise control vehicle distance sensor module. When DTC C1002 is set, it becomes necessary to mechanically align the radar using the special alignment tool. Refer to CELL Link Error - Link target cell (cell ID 117703) is invalid for this publication.. For further information on how to aim and align the radar, refer to CELL Link Error - Link target cell (cell ID 226428) is invalid for this publication.. An out of alignment condition may be as a result of tampering or damage to the cruise control vehicle distance sensor module mounting structures or the adjuster settings. An out of alignment condition may also be as a result of damage to the front end of the vehicle or merely as a result of wear and tear . Refer toCELL Link Error - Link target cell (cell ID 224682) is invalid for this publication. on how to properly mount and adjust the cruise control vehicle distance sensor module. Performance of the ACC System may be degraded after a cruise control vehicle distance sensor module replacement. Normal vehicle driving will correct the performance of the ACC System.

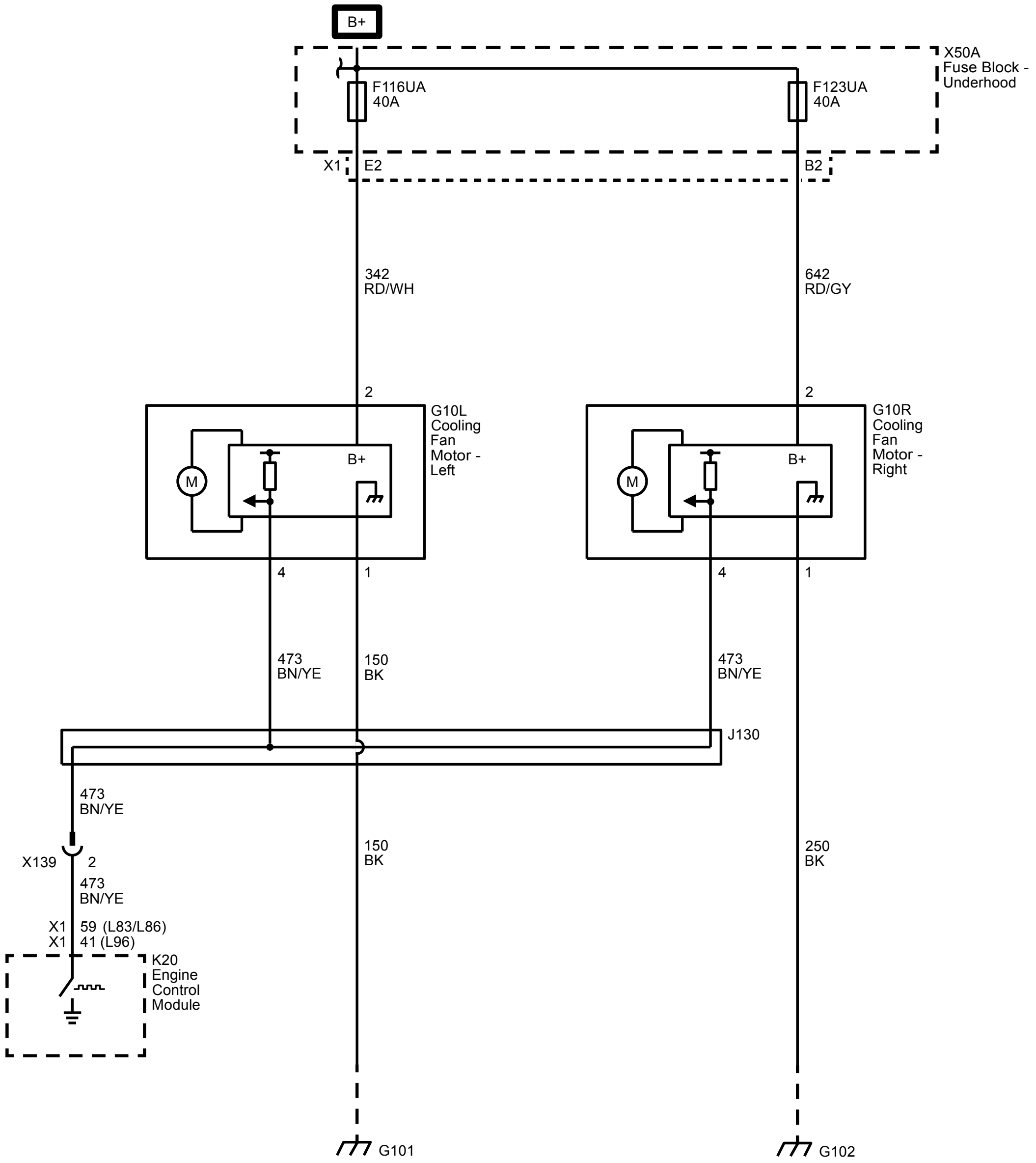
Engine/Propulsion

Engine Heating and Cooling

Schematic and Routing Diagrams

Engine Heating/Cooling Schematics

Engine Cooling Fans


B+
X50A
Fuse Block -
Underhood
F116UA
40A
F123UA
40A
X1
E2
B2
342
RD/WH
642
RD/GY
2
2
G10L
Cooling
Fan
Motor -
Left
G10R
Cooling
Fan
Motor -
Right
M
B+
M
B+
4
1
4
1
473
BN/YE
150
BK
473
BN/YE
J130
473
BN/YE
X139
2
473
BN/YE
X1
X1
59 (L83/L86)
41 (L96)
K20
Engine
Control
Module
150
BK
250
BK
G101
G102

LOC

DESC

Description and Operation

Cooling Fan Description and Operation

Cooling Fan Control

The engine cooling fan system is composed of 2 electric cooling fans, fan motors, and a control module. The engine control module (ECM) controls the fan speed by sending a pulse width modulated (PWM) signal to the cooling fan control module. The cooling fan control module varies the voltage drop across the cooling fan motors in relation to the pulse width modulated signal, which allows the cooling fans to operate at variable speeds.

The cooling fan speed is effected by many different conditions and the ECM will adjust the duty cycle from 0–100 percent based on cooling system requirements. The scan tool output control is only capable of operating the cooling fan increments, between 10–90 percent. 90 percent is considered high speed fan. When multiple cooling fan speed requests are received, the ECM operates the fan at the highest of speed requests. The ECM commands the fans ON under the following conditions:

- The engine coolant temperature is warmer than a predetermined temperature.
- The engine oil temperature is warmer than a predetermined temperature.
- The A/C pressure reaches a predetermined pressure.
- If the engine coolant temperature at key-off is warmer than a predetermined value, or the A/C pressure is greater than a predetermined value, the cooling fan will operate at a low speed. The fan will shut OFF if the temperature or pressure drops below the predetermined value, but will only operate for 2 minutes, regardless of the coolant temperature or A/C pressure.

Cooling System Electronic Component Description and Operation

Coolant Heater

The coolant heater operates using 110 V AC external power and is designed to warm the coolant in the engine block area for improved starting in very cold weather. The coolant heater also helps reduce fuel consumption when a cold engine is warming up. The unit is equipped with a detachable AC power cord. A weather shield on the cord is provided to protect the plug when not in use.

Engine or Radiator Coolant Temperature Sensor

The engine coolant temperature (ECT) sensor or radiator coolant temperature (RCT) sensor is a variable resistor that measures the temperature of the engine or radiator coolant. The ECM supplies 5 V to the sensor signal circuit and a ground for the low reference circuit.

Engine Coolant Thermostat Heater

The ECM controls the pulse width modulated (PWM) thermostat heater circuit. The engine coolant thermostat heater helps control coolant flow and regulates the engine operating temperature. The ignition relay supplies 12 V to the thermostat through a fuse. The ECM controls the engine coolant thermostat heater by grounding the control circuit with a solid state device called a driver. The driver is equipped with a feedback circuit that is pulled-up to a voltage. The ECM can determine if the control circuit is open, shorted to ground, or shorted to a voltage by monitoring the feedback voltage.

Electronic Coolant Pump

The switchable water pump is always ON in the default position. When commanded, an actuator disengages a clutch that decouples the pump from the engine. An Engine Material Sensor has been introduced on the engine head for the switchable water pump control and engine protection purposes. The engine metal temperature (EMT) sensor is present only if the switchable water pump is present in the specific application.

Engine Metal Temperature Sensor/Cylinder Head Temperature Sensor

The cylinder head temperature sensor is a variable resistor that measures the temperature of the cylinder head. The engine control module (ECM) supplies 5 V to the cylinder head temperature sensor signal circuit and a ground for the low reference circuit.

Electro-Viscous (EV) Fan Clutch

The ECM controls the EV fan clutch operation. The ECM regulates a 12-volt pulse width modulated signal (PWM) to the cooling fan relay. The PWM signal determines the ON time of the relay. As the ECM command increases, so does the ON time of the relay. The relay ON time directly controls the amount of time the solenoid, which is internal to the fan clutch, is energized. When the solenoid in the fan clutch is energized, it opens the spring loaded valve and allows fluid to flow from the storage chamber to the fluid coupling of the cooling fan clutch, which increases the fan speed. When the solenoid is de-energized, the spring loaded valve closes, and allows the fluid in the coupling of the fan clutch to drain back to the storage chamber, which reduces fan speed. The rapid modulation of the fan clutch solenoid valve gives the ECM the ability to precisely control the amount of fluid that remains in the fluid coupler, allowing more effective regulation of the fan speed and powertrain cooling requirements.

Cooling System Description and Operation

Engine Coolant Indicators

ENGINE COOLANT HOT

The instrument panel cluster (IPC) displays ENGINE COOLANT HOT message when the IPC receives a message from the powertrain control module (PCM) requesting illumination of this driver warning.

ENGINE OVERHEATED

The IPC displays ENGINE OVERHEATED message when the IPC receives a message from the PCM requesting illumination of this driver warning.

REDUCED ENGINE POWER

The IPC displays REDUCED ENGINE POWER message when the IPC detects a reduced engine power condition from the PCM. The IPC receives a message from the PCM requesting illumination when the engine temperature exceeds a calibrated value.

Coolant Heater (If Equipped)

The optional engine coolant heater (RPO K05) operates using 110-volt AC external power and is designed to warm the coolant in the engine block area for improved starting in very cold weather −18°C (0°F). The coolant heater helps reduce fuel consumption when a cold engine is warming up. The unit is equipped with a detachable AC power cord. A weather shield on the cord is provided to protect the plug when not in use.

Cooling System

The cooling system's function is to maintain an efficient engine operating temperature during all engine speeds and operating conditions. The cooling system is designed to remove approximately one-third of the heat produced by the burning of the air-fuel mixture. When the engine is cold, the coolant does not flow to the radiator until the thermostat opens. This allows the engine to warm quickly.

Cooling Cycle

Coolant is drawn from the radiator outlet and into the water pump inlet by the water pump. Coolant will then be pumped through the water pump outlet and into the engine block. In the engine block, the coolant circulates through the water jackets surrounding the cylinders, where it absorbs heat.

Some coolant is also pumped from the water pump to the heater core, then back to the water pump. This provides the passenger compartment with heat and defrost.

The coolant is then forced through the cylinder head gasket openings and into the cylinder heads. In the cylinder heads, the coolant flows through the water jackets surrounding the combustion chambers and valve seats, where it absorbs additional heat.

Coolant

The engine coolant is a solution made up of a 50-50 mixture of DEX-COOL and suitable drinking water. The coolant solution carries excess heat away from the engine to the radiator, where the heat is dissipated to the atmosphere.

Radiator

The radiator is a heat exchanger. It consists of a core and two tanks. The aluminum core is a tube and fin crossflow design that extends from the inlet tank to the outlet tank. Fins are placed around the outside of the tubes to improve heat transfer to the atmosphere.

The inlet and outlet tanks are a molded, high temperature, nylon reinforced plastic material. A high temperature rubber gasket seals the tank flange edge to the aluminum core. The tanks are clamped to the core with clinch tabs. The tabs are part of the aluminum header at each end of the core.

The radiator also has a drain cock (except HD), located in the bottom of the right hand tank. The drain cock unit includes the drain cock and drain cock seal.

The radiator removes heat from the coolant passing through it. The fins on the core transfer heat from the coolant passing through the tubes. As air passes between the fins, it absorbs heat and cools the coolant.

Surge Tank

The surge tank is a plastic tank with a threaded pressure cap. The tank is mounted at a point higher than all other coolant passages. The surge tank provides an air space in the cooling system that allows the coolant to expand and contract. The surge tank provides a coolant fill point and a central air bleed location.

During vehicle use, the coolant heats and expands. The increased coolant volume flows into the surge tank. As the coolant circulates, any air is allowed to bubble out. Coolant without air bubbles absorbs heat much better than coolant with bubbles.

During vehicle use, the coolant heats and expands. The increased coolant volume can in some conditions push past the pressure cap and through a channel into the overflow bottle. As the coolant circulates, air is allowed to bubble out. This air is then transferred to the overflow bottle, through the surge tank cap, where it returns to the atmosphere. Coolant without air bubbles absorbs heat much better than coolant with bubbles. When the engine cools, the coolant, without air bubbles, contracts back into the surge tank from the bottom of the overflow bottle.

Pressure Cap

The pressure cap seals the cooling system. It contains a blow off or pressure relief valve and a vacuum or atmospheric valve. The pressure valve is held against its seat by a spring, which protects the radiator from excessive cooling system pressure. The vacuum valve is held against its seat by a spring, which permits opening of the valve to relieve vacuum created in the cooling system as it cools off. The vacuum, if not relieved, might cause the radiator and/or coolant hoses to collapse.

The pressure cap allows cooling system pressure to build up as the temperature increases. As the pressure builds, the boiling point of the coolant increases. Engine coolant can be safely run at a temperature much higher than the boiling point of the coolant at atmospheric pressure. The hotter the coolant is, the faster the heat transfers from the radiator to the cooler, passing air.

The pressure in the cooling system can get too high. When the cooling system pressure exceeds the rating of the pressure cap, it raises the pressure valve, venting the excess pressure.

As the engine cools down, the temperature of the coolant drops and a vacuum is created in the cooling system. This vacuum causes the vacuum valve to open, allowing outside air into the surge tank. This equalizes the pressure in the cooling system with atmospheric pressure, preventing the radiator and coolant hoses from collapsing.

Air Baffles and Seals

The cooling system uses deflectors, air baffles and air seals to increase cooling system capability. Deflectors are installed under the vehicle to redirect airflow beneath the vehicle and through the radiator to increase engine cooling. Air baffles are also used to direct airflow through the radiator and increase cooling capability. Air seals prevent air from bypassing the radiator and A/C condenser, and prevent recirculation of hot air for better hot weather cooling and A/C condenser performance.

Cooling Fan and Clutch

The engine cooling fan and clutch are driven by the crankshaft via the drive belt. The cooling fan draws air through the radiator to improve the transfer of heat from the coolant to the atmosphere. As the fan blades spin, they pull cool, outside air past the radiator core. The fan clutch drives the cooling fan. The fan clutch controls the amount of torque that is transmitted from the crankshaft to the fan blades. The clutch allows more torque to engage on the fan when the engine operating temperature increases and/or the vehicle speed is low. As the torque increases, the fan turns more quickly. The fan clutch decreases the torque applied to the cooling fan when the engine temperature decreases and/or the vehicle speed is high. As the torque decreases, the fan speed decreases.

Transmission Oil Cooler

The transmission oil cooler is a heat exchanger. It is located inside the right side (V6) or left side (V8), end tank of the radiator. The transmission fluid temperature is regulated by the temperature of the engine coolant that surrounds the oil cooler as the transmission fluid passes through the cooler.

The transmission oil pump, pumps the fluid through the transmission oil cooler feed line to the oil cooler. The fluid then flows through the cooler while the engine coolant absorbs heat from the fluid. The fluid is then pumped through the transmission oil cooler return line, to the transmission.

Engine Oil Cooler

The engine oil cooler is a heat exchanger located inside the left side (V6) or right side (V8), end tank of the radiator. The engine oil temperature is controlled by the temperature of the engine coolant that surrounds the oil cooler in the radiator.

The engine oil pump, pumps the oil through the engine oil cooler line to the oil cooler. The oil then flows through the cooler where the engine coolant absorbs heat from the oil. The oil is then pumped through the oil cooler return line, to the engine block system.

Cooling Fan Control – Two Fan System

The engine cooling fan system consists of 2 electrical cooling fans, with a microcontroller that receives and allows the powertrain control module (PCM) to operate both fans together at several speeds. The cooling fans and fan PWM Signal receive battery positive voltage from the underhood fuse block.

During closed loop mode (PWM signal between 10% and 91%), both cooling fans will run at a controlled speed, depending on the percentage of PWM signal is being sent. At this closed loop mode, both fans will run at the speed it is being indicated according to the signal is being read by the microcontroller.

During open loop mode (PWM signal between 92% and 95%), both cooling fans will run at a non-controlled speed, this mode is when the fans will run at the maximum speed giving the maximum airflow, this mode is activated when conditions being mentioned later in this document activate it.

Note: The right and left cooling fan connectors are interchangeable. When servicing the fans be sure that the connectors are plugged into the correct fan.

The PCM commands the low speed cooling fans ON under the following conditions:

- Engine coolant temperature exceeds a calibrated value.
- A/C refrigerant pressure exceeds a calibrated value.
- After the vehicle is shut OFF if the engine coolant temperature at key-off is:
  - 107°C-112°C then enable low speed fans.
  - 105°C then disable low speed fans.
  - 112°C then enable high speed fan.
  - 105°C then disable high speed fans.
  - The fans (high and low speed) will turn off after a maximum 5 min.

The PCM commands the high speed fans ON under the following conditions:

- Engine coolant temperature exceeds a calibrated value.
- A/C refrigerant pressure exceeds a calibrated value.
- When certain DTCs set.

At idle and very low vehicle speeds the cooling fans are only allowed to increase in speed if required. This insures idle stability by preventing the fans from cycling between high and low speed.

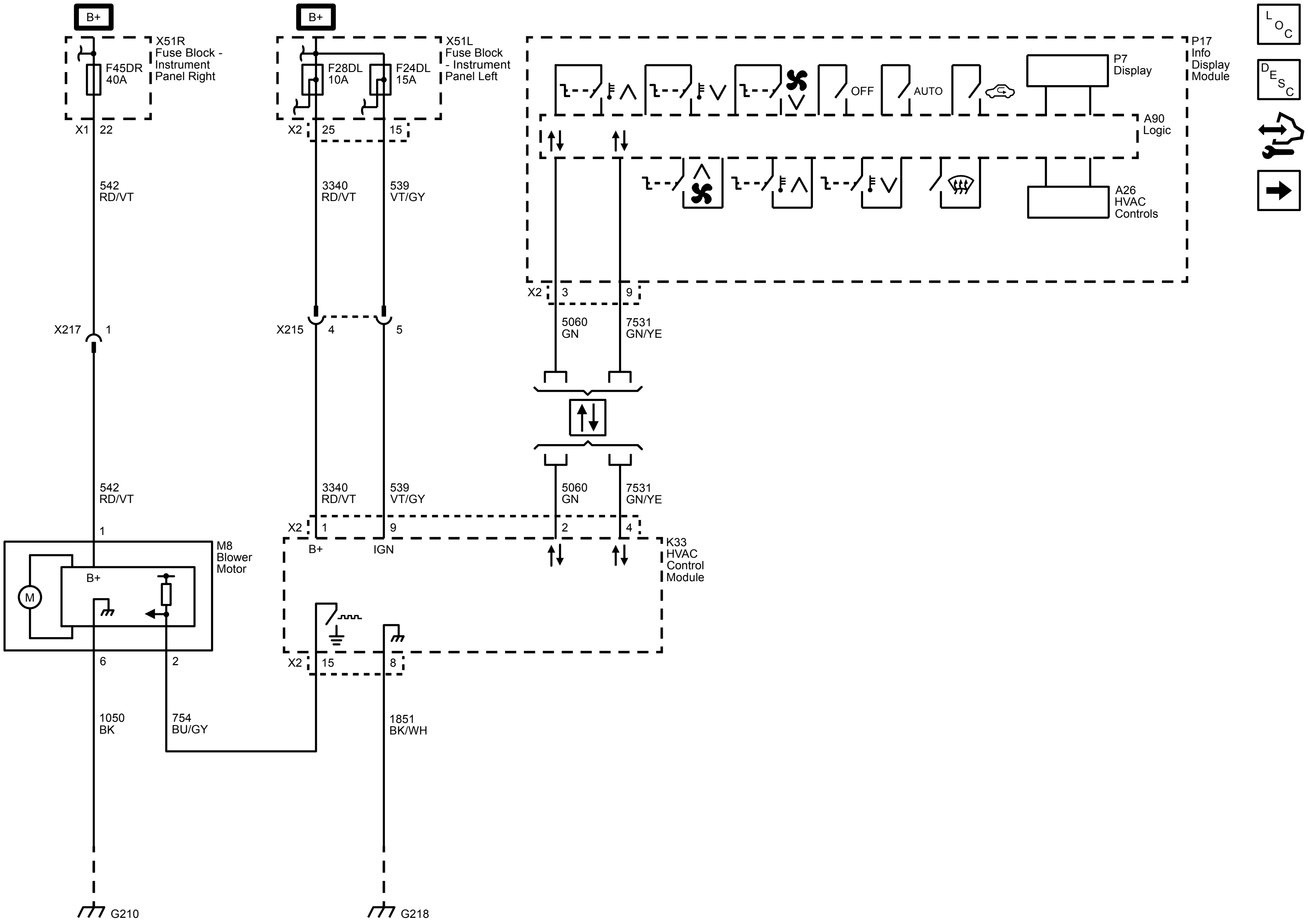
HVAC

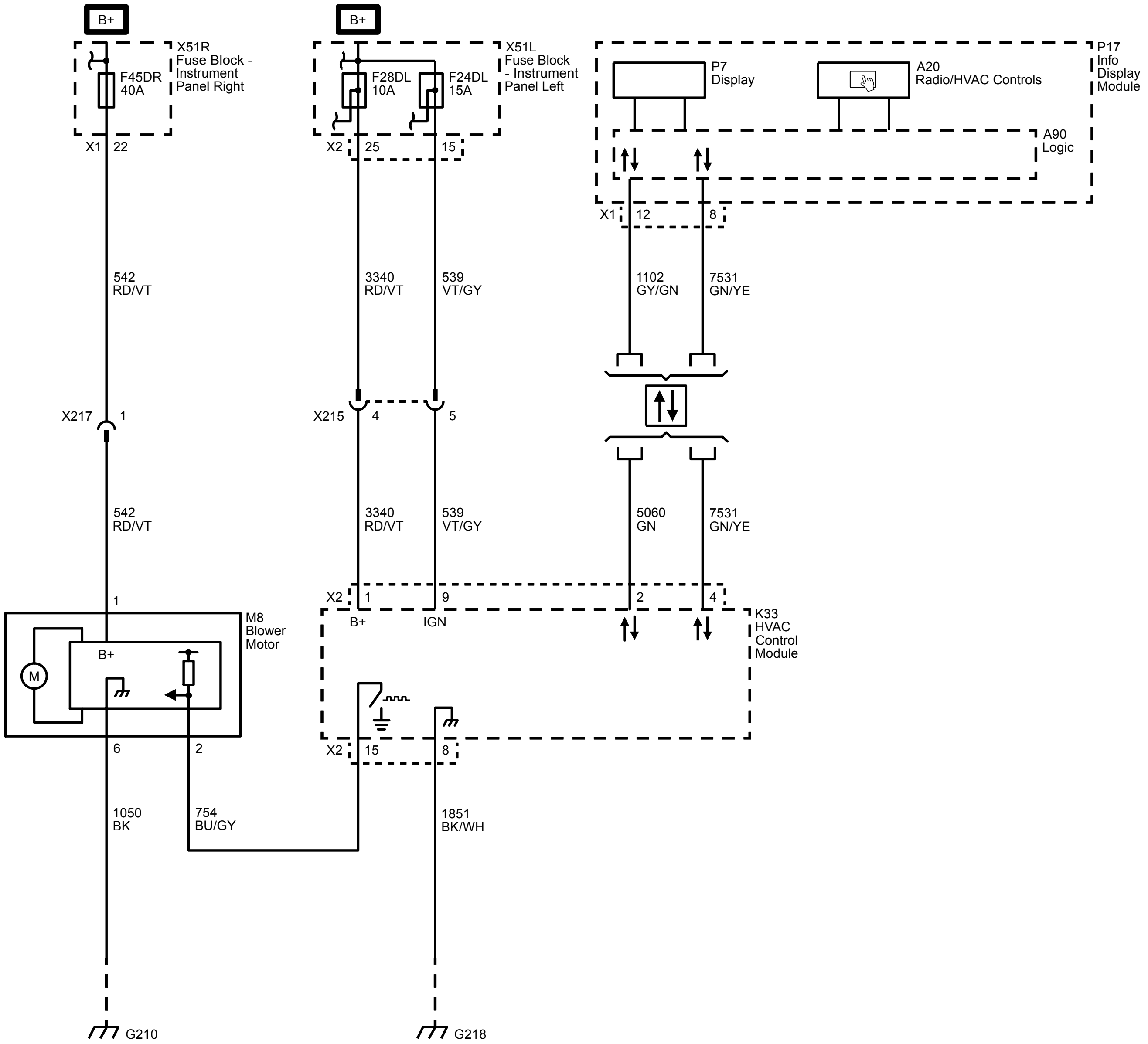
HVAC - Automatic

Schematic and Routing Diagrams

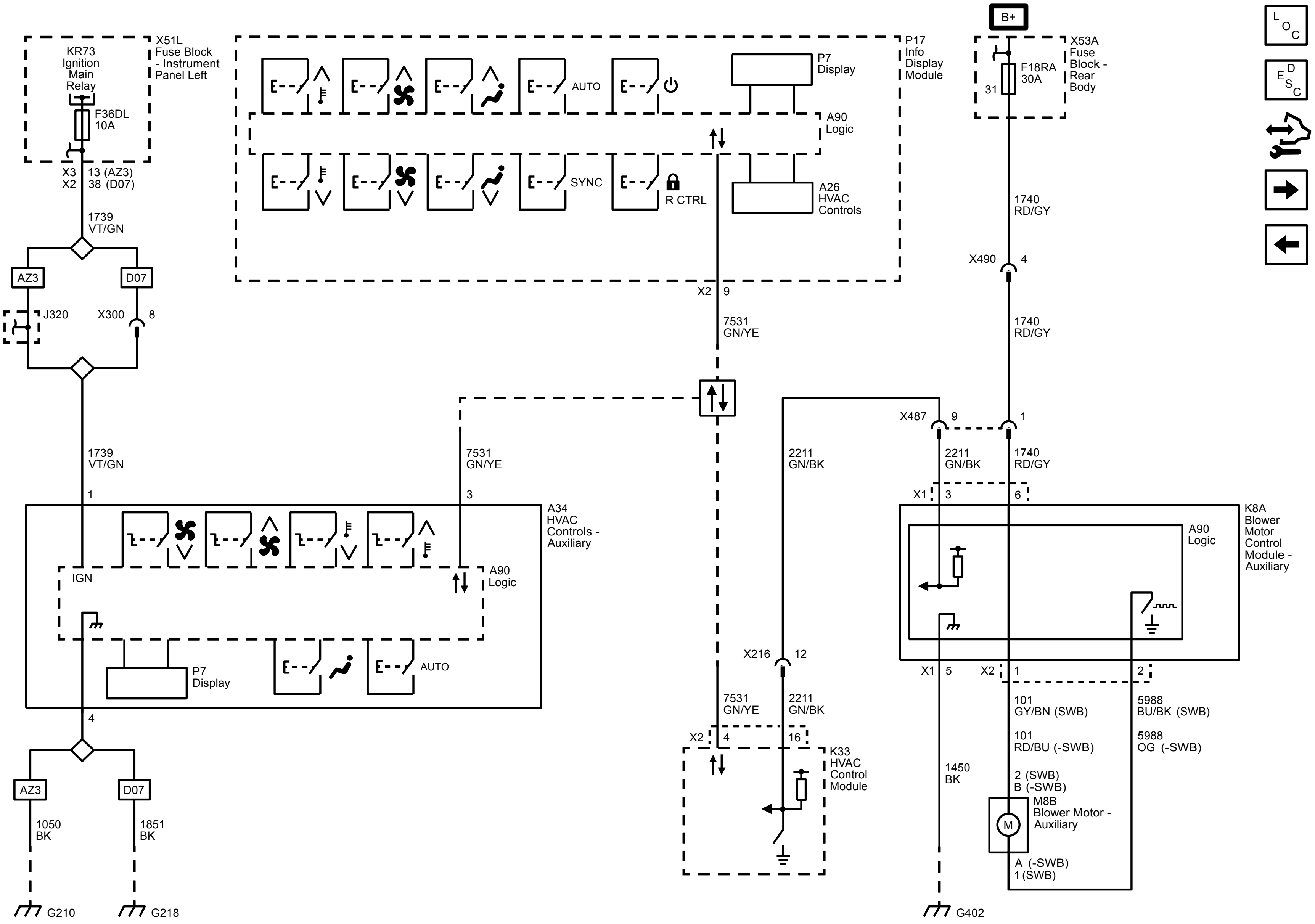
HVAC Schematics

Power, Ground, Serial Data and Front Blower Controls (X88 or Z88)


B+
X51R
Fuse Block - Instrument Panel Right
F45DR 40A
X1 22
542 RD/VT
X217 1
542 RD/VT
1
M8 Blower Motor
M
B+
6
2
1050 BK
754 BU/GY
G210
B+
X51L
Fuse Block - Instrument Panel Left
F28DL 10A
F24DL 15A
X2 25 15
3340 RD/VT
539 VT/GY
X215 4 5
3340 RD/VT
539 VT/GY
X2 1 9 2 4
B+ IGN
K33 HVAC Control Module
X2 15 8
1851 BK/WH
G218
P17 Info Display Module
P7 Display
OFF
AUTO
A90 Logic
A26 HVAC Controls
X2 3 9
5060 GN
7531 GN/YE
5060 GN
7531 GN/YE
LOC
DESC

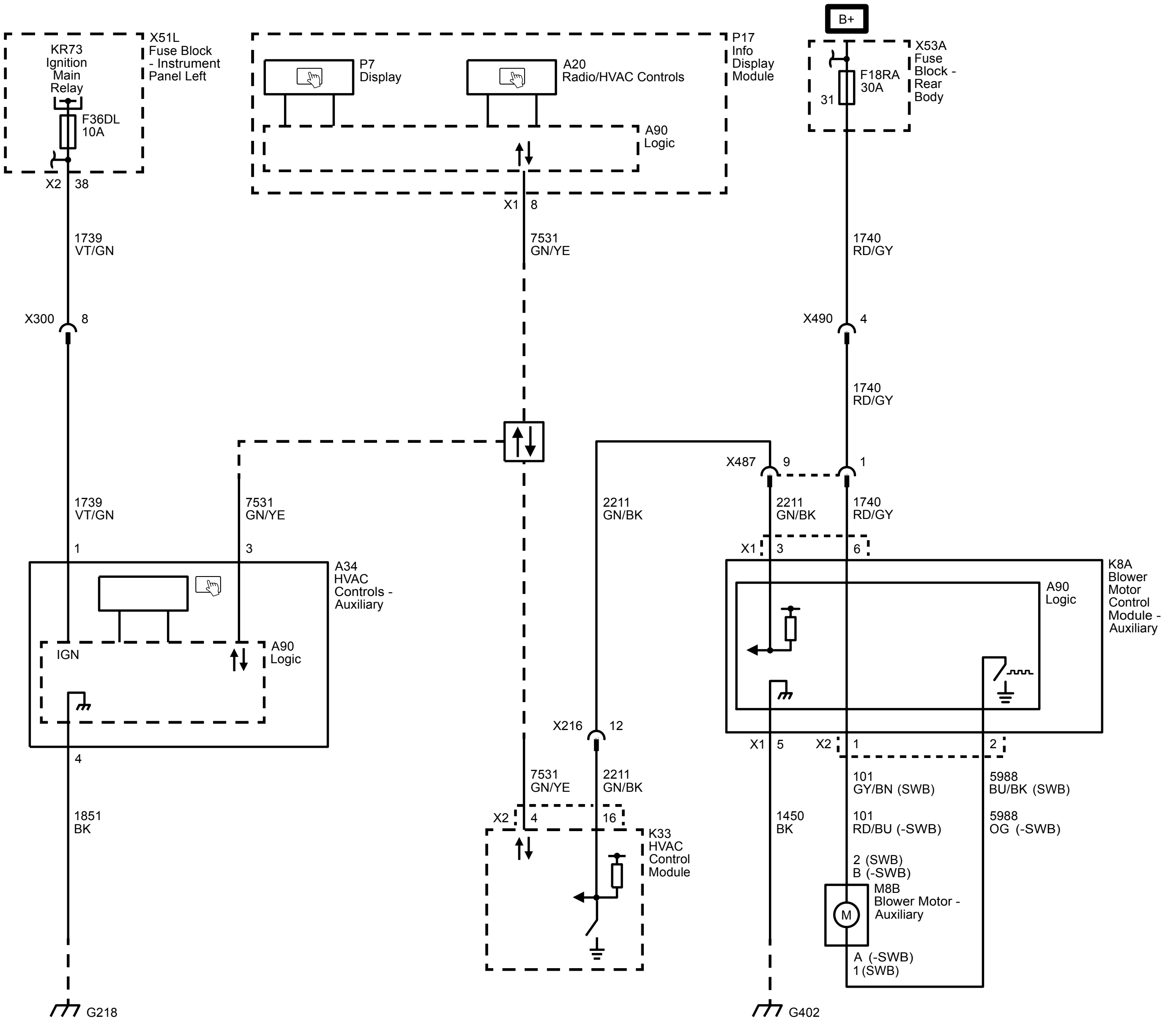

B+
X51R
Fuse Block - Instrument Panel Right
F45DR
40A
X1
22
542
RD/VT
X217
1
542
RD/VT
1
M8
Blower Motor
M
B+
6
2
1050
BK
754
BU/GY
G210
B+
X51L
Fuse Block - Instrument Panel Left
F28DL
10A
F24DL
15A
X2
25
15
3340
RD/VT
539
VT/GY
X215
4
5
3340
RD/VT
539
VT/GY
X2
1
9
B+
IGN
K33
HVAC Control Module
X2
15
8
1851
BK/WH
G218
P17
Info Display Module
P7
Display
A20
Radio/HVAC Controls
A90
Logic
X1
12
8
1102
GY/GN
7531
GN/YE
5060
GN
7531
GN/YE
2
4

Auxiliary Blower Controls (X88 or Z88)



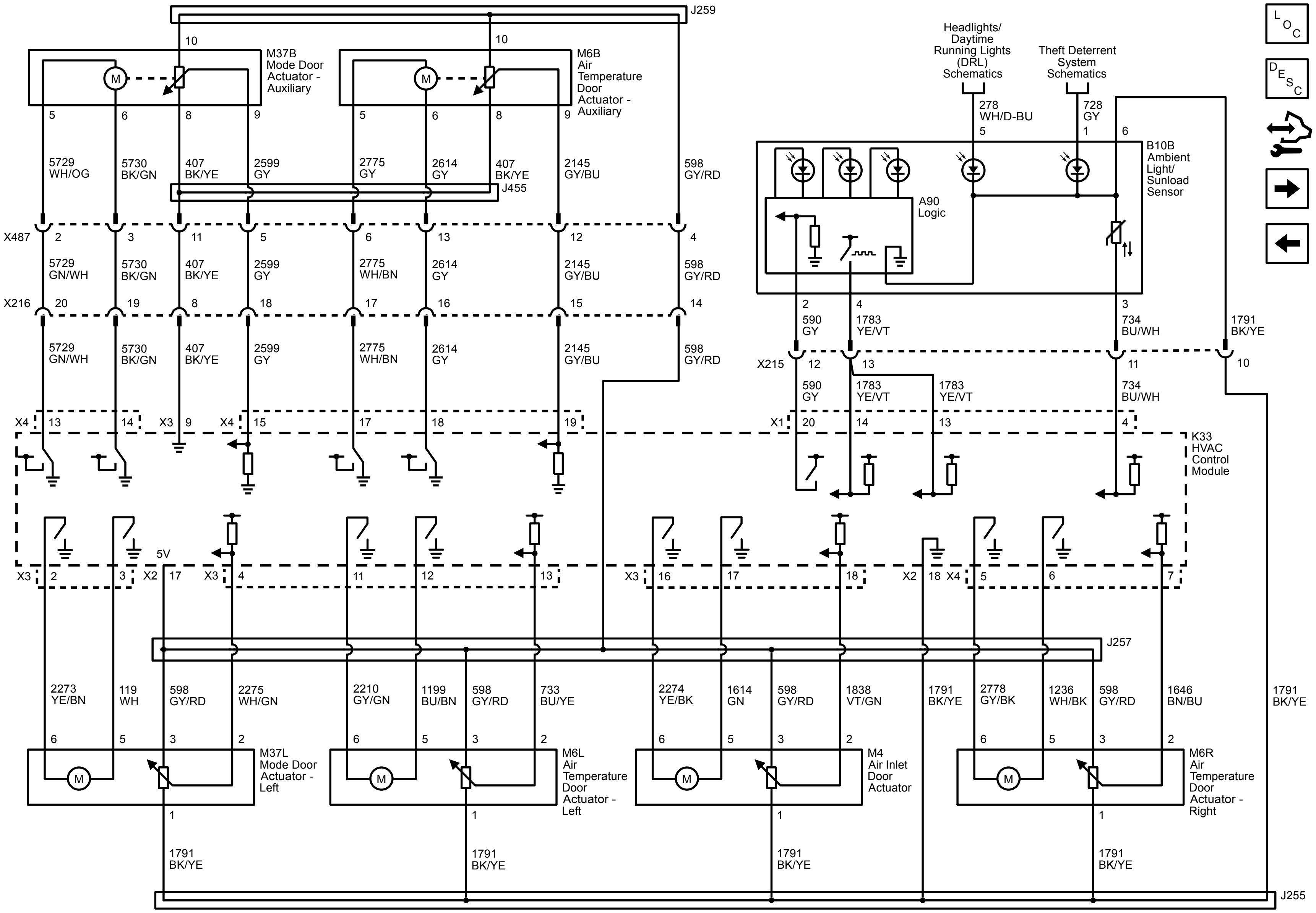
KR73 Ignition Main Relay
X51L Fuse Block - Instrument Panel Left
F36DL 10A
X3 13 (AZ3)
X2 38 (D07)
1739 VT/GN
AZ3
D07
J320
X300 8
1739 VT/GN
B+
X53A Fuse Block - Rear Body
F18RA 30A
31
P17 Info Display Module
P7 Display
A90 Logic
AUTO
SYNC
R CTRL
A26 HVAC Controls
X2 9
7531 GN/YE
1740 RD/GY
X490 4
1740 RD/GY
X487 9
1
7531 GN/YE
2211 GN/BK
2211 GN/BK
1740 RD/GY
1
3
A34 HVAC Controls - Auxiliary
IGN
A90 Logic
P7 Display
AUTO
4
X1 3
6
K8A Blower Motor Control Module - Auxiliary
A90 Logic
X1 5
X2 1
2
X216 12
7531 GN/YE
2211 GN/BK
X2 4
16
K33 HVAC Control Module
101 GY/BN (SWB)
101 RD/BU (-SWB)
5988 BU/BK (SWB)
5988 OG (-SWB)
1450 BK
2 (SWB)
B (-SWB)
M8B Blower Motor - Auxiliary
M
A (-SWB)
1 (SWB)
AZ3
D07
1050 BK
1851 BK
G210
G218
G402

Auxiliary Blower Controls (Z75)

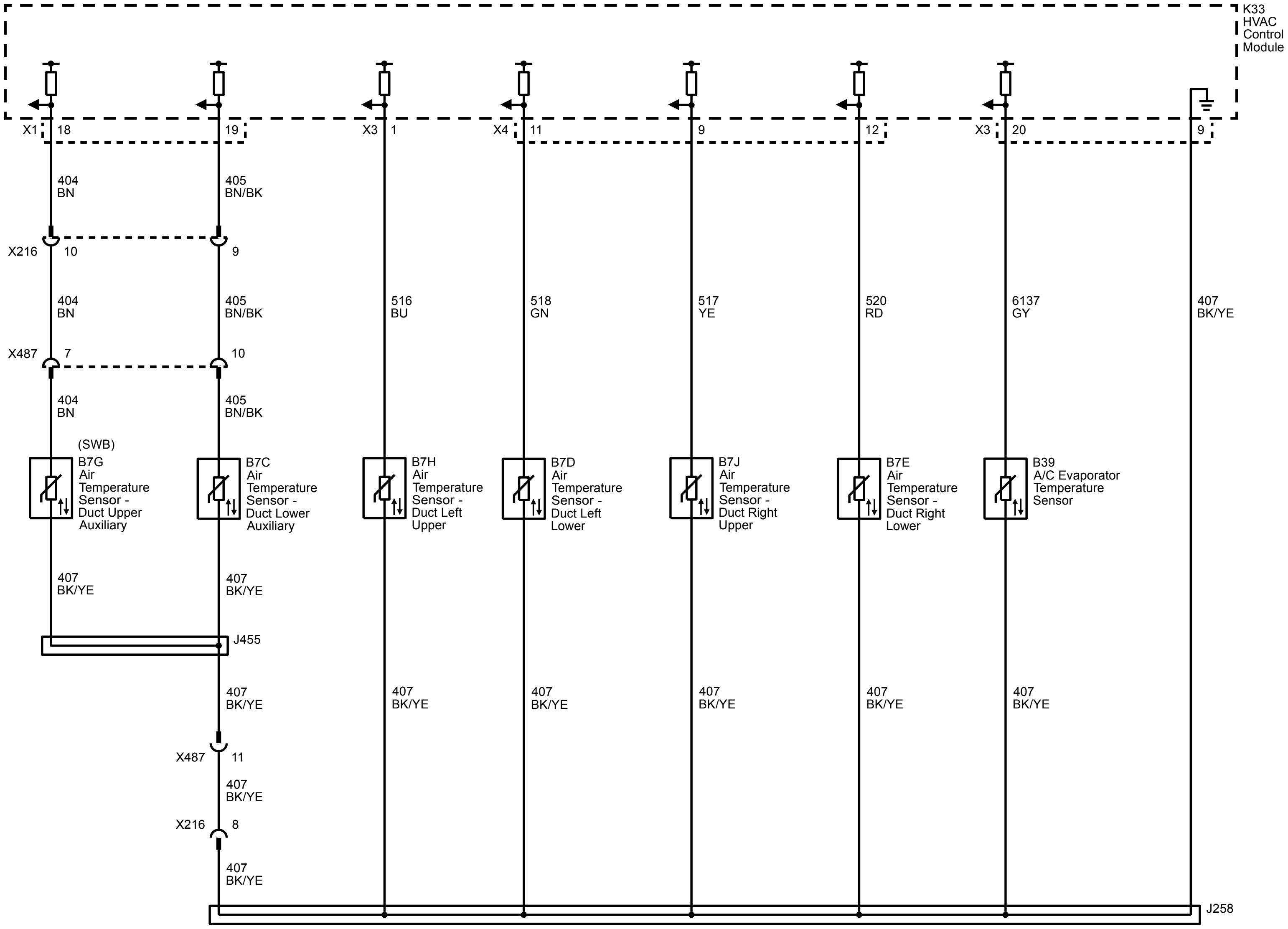


KR73 Ignition Main Relay
X51L Fuse Block - Instrument Panel Left
F36DL 10A
X2 38
1739 VT/GN
X300 8
1739 VT/GN
1
P7 Display
A20 Radio/HVAC Controls
P17 Info Display Module
A90 Logic
X1 8
7531 GN/YE
7531 GN/YE
3
A34 HVAC Controls - Auxiliary
IGN
A90 Logic
4
1851 BK
G218
B+
X53A Fuse Block - Rear Body
F18RA 30A
31
1740 RD/GY
X490 4
1740 RD/GY
X487 9
1
2211 GN/BK
2211 GN/BK
1740 RD/GY
X1 3
6
K8A Blower Motor Control Module - Auxiliary
A90 Logic
X1 5
X2 1
2
X216 12
7531 GN/YE
2211 GN/BK
X2 4
16
K33 HVAC Control Module
1450 BK
G402
101 GY/BN (SWB)
101 RD/BU (-SWB)
2 (SWB)
B (-SWB)
M8B Blower Motor - Auxiliary
M
A (-SWB)
1 (SWB)
5988 BU/BK (SWB)
5988 OG (-SWB)

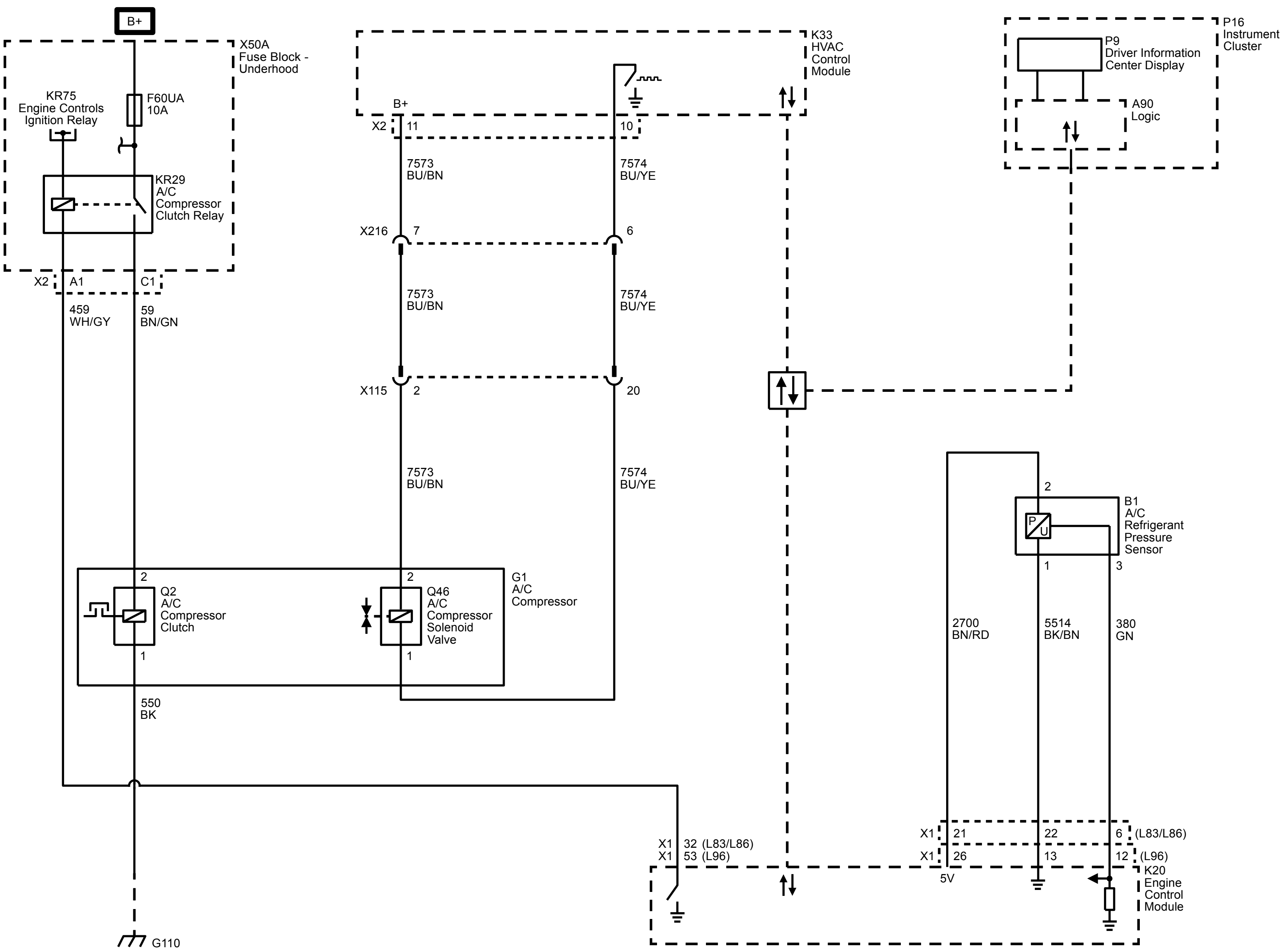
Ambient Light/Sunload Sensor and Mode Doors


J259
10
10
M37B
Mode Door
Actuator -
Auxiliary
M6B
Air
Temperature
Door
Actuator -
Auxiliary
M
M
5
6
8
9
5
6
8
9
5729
WH/OG
5730
BK/GN
407
BK/YE
2599
GY
2775
GY
2614
GY
407
BK/YE
J455
2145
GY/BU
598
GY/RD
X487
2
3
11
5
6
13
12
4
5729
GN/WH
5730
BK/GN
407
BK/YE
2599
GY
2775
WH/BN
2614
GY
2145
GY/BU
598
GY/RD
X216
20
19
8
18
17
16
15
14
5729
GN/WH
5730
BK/GN
407
BK/YE
2599
GY
2775
WH/BN
2614
GY
2145
GY/BU
598
GY/RD
Headlights/
Daytime
Running Lights
(DRL)
Schematics
Theft Deterrent
System
Schematics
278
WH/D-BU
728
GY
5
1
6
B10B
Ambient
Light/
Sunload
Sensor
A90
Logic
2
4
3
590
GY
1783
YE/VT
734
BU/WH
1791
BK/YE
X215
12
13
11
10
590
GY
1783
YE/VT
1783
YE/VT
734
BU/WH
X4
13
14
X3
9
X4
15
17
18
19
X1
20
14
13
4
K33
HVAC
Control
Module
5V
X3
2
3
X2
17
X3
4
11
12
13
X3
16
17
18
X2
18
X4
5
6
7
J257
2273
YE/BN
119
WH
598
GY/RD
2275
WH/GN
2210
GY/GN
1199
BU/BN
598
GY/RD
733
BU/YE
2274
YE/BK
1614
GN
598
GY/RD
1838
VT/GN
1791
BK/YE
2778
GY/BK
1236
WH/BK
598
GY/RD
1646
BN/BU
1791
BK/YE
6
5
3
2
6
5
3
2
6
5
3
2
6
5
3
2
M37L
Mode Door
Actuator -
Left
M6L
Air
Temperature
Door
Actuator -
Left
M4
Air Inlet
Door
Actuator
M6R
Air
Temperature
Door
Actuator -
Right
M
M
M
M
1
1
1
1
1791
BK/YE
1791
BK/YE
1791
BK/YE
1791
BK/YE
J255

Temperature Sensors


K33
HVAC
Control
Module
X1
18
19
X3
1
X4
11
9
12
X3
20
9
404
BN
405
BN/BK
X216
10
9
404
BN
405
BN/BK
516
BU
518
GN
517
YE
520
RD
6137
GY
407
BK/YE
X487
7
10
404
BN
405
BN/BK
(SWB)
B7G
Air
Temperature
Sensor -
Duct Upper
Auxiliary
B7C
Air
Temperature
Sensor -
Duct Lower
Auxiliary
B7H
Air
Temperature
Sensor -
Duct Left
Upper
B7D
Air
Temperature
Sensor -
Duct Left
Lower
B7J
Air
Temperature
Sensor -
Duct Right
Upper
B7E
Air
Temperature
Sensor -
Duct Right
Lower
B39
A/C Evaporator
Temperature
Sensor
407
BK/YE
407
BK/YE
J455
407
BK/YE
407
BK/YE
407
BK/YE
407
BK/YE
407
BK/YE
407
BK/YE
X487
11
407
BK/YE
X216
8
407
BK/YE
J258

A/C Compressor Controls


B+
X50A
Fuse Block - Underhood
KR75
Engine Controls Ignition Relay
F60UA
10A
KR29
A/C Compressor Clutch Relay
X2
A1
C1
459
WH/GY
59
BN/GN
K33
HVAC Control Module
B+
X2
11
10
7573
BU/BN
7574
BU/YE
X216
7
6
7573
BU/BN
7574
BU/YE
X115
2
20
7573
BU/BN
7574
BU/YE
P16
Instrument Cluster
P9
Driver Information Center Display
A90
Logic
G1
A/C Compressor
2
Q2
A/C Compressor Clutch
1
2
Q46
A/C Compressor Solenoid Valve
1
550
BK
G110
2
B1
A/C Refrigerant Pressure Sensor
P
U
1
3
2700
BN/RD
5514
BK/BN
380
GN
X1
X1
32 (L83/L86)
53 (L96)
X1
21
22
6 (L83/L86)
X1
26
13
12 (L96)
5V
K20
Engine Control Module

Description and Operation

Automatic HVAC Description and Operation

The air temperature and the air delivery description and operation are divided into eight areas:

- HVAC Control Components
- Air Speed (Front)
- Air Speed (Rear)
- Air Delivery (Front)
- Air Delivery (Rear)
- Heating and A/C Operation
- Recirculation Operation
- Automatic Operation
- Engine Coolant
- A/C Cycle

HVAC Control Components

HVAC Control

The HVAC control contains all switches, buttons, and dials which are required to control the functions of the HVAC system and serve as interface between the operator and the HVAC control module. The selected values are passed to the HVAC control module via LIN-Bus.

HVAC Control Module

The HVAC control module is a GMLAN device that interfaces between the operator and the HVAC system to maintain and control desired air temperature and air distribution settings. The battery positive voltage circuit provides power that the HVAC control module uses for keep alive memory. If the battery positive voltage circuit loses power, all HVAC DTCs and settings will be erased from keep alive memory. The body control module (BCM), which is the vehicle mode master, provides a device ON-Signal. The HVAC control module provides blower, air delivery mode and air temperature settings.

The HVAC control module supports the following features:

Feature	Availability
Afterblow	Available if reprogrammed by the technician
Purge	Yes
Personalization	Yes
Actuator Calibration	Yes

Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, left and right temperature, and recirculation.

Each actuator used in the system is a 5-wire bi-directional electric motor that incorporate a feedback potentiometer. The five circuits are, low reference, 5 V reference, actuator position signal, and two control circuits. The control circuits use either a ground or 12 V value to coordinate the actuator movement. In order to move the actuator, the HVAC control module grounds one of the control circuits while providing the other with 12 V. The HVAC control module reverses the polarity of the control circuits to move the actuator in the opposite direction.

When the actuator shaft rotates, the potentiometer’s sliding contact changes the door position signal between 0–5 V. The HVAC control module converts the voltage signal to counts. The total range of the counts is 0–1024, with an operating range between 20–1000. The actual operating range of an actuator is determined during calibration. During calibration, the actuator is moved though its full range of travel and the module stores the minimum and maximum value. Based on the desired system operation, the module sets a commanded, or targeted, value for the actuators. The control circuits are operated to move the door to the required position, and the changing position signal is sent to the module. Once the actual position signal and the commanded value are the same, the module ceases operating the control circuits and the actuator (and door) remain in the desired position.

Blower Motor

The blower motor control module is an interface between the HVAC control module and the blower motor. The blower motor speed control from the HVAC control module, battery positive and ground circuits enable the blower motor control module to operate. The HVAC control module provides a pulse width modulation (PWM) signal to the blower motor control module in order to command the blower motor speed. The blower motor control module transfers the PWM signal into a corresponding blower motor voltage.

Duct Temperature Sensors

The air temperature sensors are 2-wire negative temperature co-efficient thermistors. The sensors operate within a temperature range of −40 to +85°C (−40 to +185°F). The sensors are installed in the air distribution ducts and measure the temperature of the air that streams from the ducts. The HVAC control module uses these values to adjust the mixed air flap position according to the requested temperature.

Evaporator Temperature Sensor

The evaporator temperature sensor is a 2-wire negative temperature co-efficient thermistor. The sensor operates within a temperature range of −40 to +85°C (−40 to +185°F). The sensor is installed at the evaporator and measures its temperature. If the temperature drops under 3°C (38°F), the compressor will be switched off in order to prevent evaporator icing.

A/C Refrigerant Pressure Sensor

The A/C refrigerant pressure sensor is a 3-wire piezoelectric pressure transducer. A 5 V reference voltage, low reference, and signal circuits enable the sensor to operate. The A/C pressure signal can be between 0.2–4.8 V. When the A/C refrigerant pressure is low, the signal value is near 0 V. When the A/C refrigerant pressure is high, the signal value is near 5 V. The engine control module (ECM) converts the voltage signal to a pressure value. When pressure is too high or too low, the ECM will not allow the A/C compressor clutch to engage.

A/C Compressor

The A/C compressor uses a conventional belt driven magnetic clutch to engage and mechanically turn the compressor. When the A/C switch is pressed, the HVAC control module sends an A/C request message to the ECM via serial data. If specific criteria is met, the ECM then grounds the A/C compressor clutch relay control circuit, which will switch the A/C compressor clutch relay. With the relay contacts closed, battery voltage is supplied to the permanently grounded A/C compressor clutch. The A/C compressor clutch will then be activated.

This A/C system utilizes a variable displacement solenoid valve to alter the amount of displacement created by the turning of the compressor. The HVAC control module provides both battery voltage and a pulse width modulated ground to the variable displacement solenoid valve. When the A/C switch is pressed, the HVAC control module grounds the variable displacement solenoid using a (PWM) signal in order to determine the amount of compressor displacement. The performance of the A/C compressor is regulated based on cooling load.

Ambient Light/Sunload Sensor

The sunload sensor is connected to ground and to a 12 V clocked power supply through the HVAC control module. This clocked power supply is to power the sensor electronics and to work as a clock generator to the sunload sensor micro controller. The sensor uses a pulse signal for data identification and transferring the sun intensity measurement. At each positive transition from the clocked supply input, the sunload sensor micro controller will shift channels enabling new intensity measurement on the signal output to the HVAC control module. The signal voltage varies between 0–4 V.

The passenger compartment temperature sensor is a negative temperature co-efficient thermistor. A signal and low reference circuit enables the sensor to operate. As the air temperature increases, the sensor resistance decreases. The sensor signal varies between 0–5 V.

Bright or high intensity light causes the vehicles interior temperature to increase. The HVAC system compensates for the increased temperature by diverting additional cool air into the vehicle.

Air Speed

The blower control switch is part of the HVAC controls. The selected value of the blower switch position is sent to the HVAC control module via LIN-Bus. The blower motor control circuitry is integrated within the blower motor assembly. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

Afterblow

Afterblow is a feature that dries the evaporator core by operating the blower motor after the engine is turned OFF. This reduces the amount of microbial growth that can create undesirable odors. The vehicle does not come equipped with the afterblow feature turned ON. If the afterblow feature is required due to an odor concern, it must be enabled using the scan tool Afterblow configuration function.

After the HVAC control module has been programmed for afterblow, the following conditions must be met for afterblow to operate:

- The engine has been turned OFF for at least 30 minutes.
- The ambient air temperature is at least 21°C (70°F).
- The A/C compressor operated for more than 2 minutes before shut down.
- The system voltage is at least 12 volts.

Once the above conditions have been met, the blower motor will perform the following sequence up to 5 times. This could last up to an hour:

1. The blower motor will be OFF for 7–11 minutes.
2. The blower motor will RUN for 25–30 seconds.

Air Delivery

The HVAC control module controls the distribution of air by the use of recirculation and mode door actuator. The modes that may be selected are:

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC control. The HVAC control delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the mode door actuator so that it drives the flap to the calculated position. Depending on the position of the flap, air is distributed through various ducts leading to the outlets in the dash. Turning the mode flap to the defrost position, the HVAC control module will move the recirculation actuator to outside air, reducing window fogging. When defrost is selected, the blower motor will be activated, regardless of the coolant temperature. The HVAC control module enables a high volume of air delivered to the front defrost vents. A/C is available in all modes.

The rear window defogger does not affect the HVAC system.

Heating and A/C Operation

The purpose of the heating and A/C system is to provide heated and cooled air to the interior of the vehicle. The A/C system will also remove humidity from the interior and reduce windshield fogging. Regardless of the temperature setting, the following can affect the rate that the HVAC system can achieve the desired temperature:

- Recirculation actuator setting
- Difference between inside and desired temperature
- Blower motor speed setting
- Mode setting

When the A/C switch is pressed, the HVAC controls sends a signal to the HVAC control module via LIN-Bus. The HVAC control module evaluates this signal and sends an A/C request signal to the ECM via CAN-Bus. The ECM checks all preconditions before releasing and if all conditions are met sends a release signal back to the HVAC control module. The ECM will provide a ground for the A/C compressor relay enabling it to close its internal contacts to send battery voltage to the A/C compressor clutch coil. The A/C compressor clutch will be activated. The performance of the A/C compressor is regulated via a variable A/C compressor solenoid valve. The HVAC control module supplies battery voltage to the A/C compressor. When the A/C switch is pressed, the HVAC control module provides a pulse width modulation (PWM) signal to the A/C compressor solenoid valve in order to command the performance of the A/C compressor.

The following conditions must be met in order to activate the A/C compressor:

- Battery voltage is between 9–18 V
- Engine coolant temperature is less than 124°C (255°F)
- Engine speed is greater than 600 RPM
- Engine speed is less than 5,500 RPM
- A/C high side pressure is between 269–2 929 kPa (39–425 PSI)
- Throttle position is less than 100%
- Evaporator temperature is greater than 3°C (38°F)
- ECM does not detect immoderate torque load
- ECM does not detect insufficient idle quality
- The ambient temperature is above 1°C (34°F)

The sensor information is used by the ECM to determine the following:

- The A/C high side pressure
- An A/C system load on the engine
- An immoderate A/C high side pressure
- The heat load at the A/C condenser

The air streams into the passenger compartment through the heater core and the evaporator core. The air temperature actuator drives the mixed air flap to direct the airflow. If the interior temperature should be increased, the mixed air flap is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air flap is put into the position in which more air streams through the evaporator core.

Recirculation Operation

The recirculation switch is integrated into the HVAC control. The selected recirculation switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake using the recirculation actuator. In recirculation mode the recirculation flap opens in order to circulate the air within the vehicle. In fresh air mode the recirculation flap is closed in order to route outside air into the vehicle.

Automatic Operation

In automatic operation, the HVAC control module maintains the comfort level inside of the vehicle by controlling the A/C compressor clutch, the blower motor, the air temperature actuators, mode actuator and recirculation actuator.

To put the HVAC system in automatic mode, the following is required:

1. The auto switch must be activated.
2. The air temperature switch must not be in either the full hot or full cold position.

Once the desired temperature is reached, the blower motor, mode, recirculation and temperature actuators automatically adjust to maintain the temperature selected. The HVAC control module performs the following functions to maintain the desired air temperature:

- Monitors the following sensors:
  - Ambient air temperature sensor
  - Lower left duct air temperature sensor
  - Lower right duct air temperature sensor
  - Upper left duct air temperature sensor
  - Upper right duct air temperature sensor
  - Ambient light/sunload sensor
- Regulate the blower motor speed
- Position the air temperature actuators
- Position the mode door actuator
- Position the recirculation actuator
- Request A/C operation
- Control of the A/C compressor

When the warmest position is selected in automatic operation the blower speed will increase gradually until the vehicle reaches normal operating temperature. When normal operating temperature is reached the blower stays on high speed and the air temperature actuators stays in the full heat position.

When the coldest position is selected in automatic operation the blower stays on high and the air temperature actuators stay in full cold position. The mode actuator remains in the panel position and the recirculation actuator will remain in the recirculation position.

Under cold ambient temperatures, the automatic HVAC system provides heat in the most efficient manner. The operator can select an extreme temperature setting but the system will not warm the vehicle any faster. Under warm ambient temperatures, the automatic HVAC system also provides air conditioning in the most efficient manner. Selecting an extreme cool temperature will not cool the vehicle any faster.

Engine Coolant

Engine coolant is the essential element of the heating system. The thermostat controls the normal engine operating coolant temperature. The thermostat also creates a restriction for the cooling system that promotes a positive coolant flow and helps prevent cavitation.

Coolant enters the heater core through the inlet heater hose, in a pressurized state. The heater core is located inside the HVAC control module. The ambient air drawn through the HVAC control module absorbs the heat of the coolant flowing through the heater core. Heated air is distributed to the passenger compartment, through the HVAC control module, for passenger comfort. Opening or closing the air temperature flap controls the amount of heat delivered to the passenger compartment. The coolant exits the heater core through the return heater hose and recirculates back to the engine cooling system.

A/C Cycle

Refrigerant is the key element in an air conditioning system. There are currently two approved Environmental Protection Agency refrigerants. They are R134a and R-1234yf, and either one could be used in this vehicle. R-1234yf is a newly EPA approved refrigerant, and it will require the use of an updated Air Conditioning Refrigerant Recovery/Recharge Cart/System. Refer to CELL Link Error - Link target cell (cell ID 48139) is invalid for this publication. for correct tool usage. Both refrigerants are very low temperature gases that can transfer the undesirable heat and moisture from the passenger compartment to the outside air.

The compressor builds pressure on the vapor refrigerant. Compressing the refrigerant also adds heat to the refrigerant. The refrigerant is discharged from the compressor, through the discharge hose, and forced to flow to the condenser and then through the balance of the A/C system. The A/C system is mechanically protected with the use of a high pressure relief valve. If the A/C refrigerant pressure sensor fails or if the refrigerant system becomes restricted and refrigerant pressure continued to rise, the high pressure relief will pop open and release refrigerant from the system.

Compressed refrigerant enters the condenser in a high temperature, high pressure vapor state. As the refrigerant flows through the condenser, the heat of the refrigerant is transferred to the ambient air passing through the condenser. Cooling the refrigerant causes the refrigerant to condense and change from a vapor to a liquid state.

The condenser is located in front of the radiator for maximum heat transfer. The condenser is made of aluminum tubing and aluminum cooling fins, which allows rapid heat transfer for the refrigerant. The semi-cooled liquid refrigerant exits the condenser and flows to the Receiver/Dehydrator(R/D).

The R/D contains desiccant that absorbs moisture that may be in the refrigerant system. The R/D also acts as a storage vessel to ensure that a steady flow of liquid reaches the thermal expansion valve. The refrigerant exits the R/D and flows through the liquid line to the thermal expansion valve.

The thermal expansion valve is located at the front of dash and attaches to the evaporator inlet and outlet pipes. The thermal expansion valve is the dividing point for the high and the low pressure sides of the A/C system. As the refrigerant passes through the thermal expansion valve, the pressure on the refrigerant is lowered. The thermal expansion valve also meters the amount of liquid refrigerant that can flow into the evaporator.

Refrigerant exiting the thermal expansion valve flows into the evaporator core in a low pressure, liquid state. Ambient air is drawn through the HVAC control module and passes through the evaporator core. Warm and moist air will cause the liquid refrigerant boil inside of the evaporator core. The boiling refrigerant absorbs heat from the ambient air and draws moisture onto the evaporator. The refrigerant exits the evaporator through the suction line and back to the A/C compressor, in a vapor state, and completing the A/C cycle of heat removal. At the A/C compressor, the refrigerant is compressed again and the cycle of heat removal is repeated.

The conditioned air is distributed through the HVAC control module for passenger comfort. The heat and moisture removed from the passenger compartment will also change form, or condense, and is discharged from the HVAC control module as water.

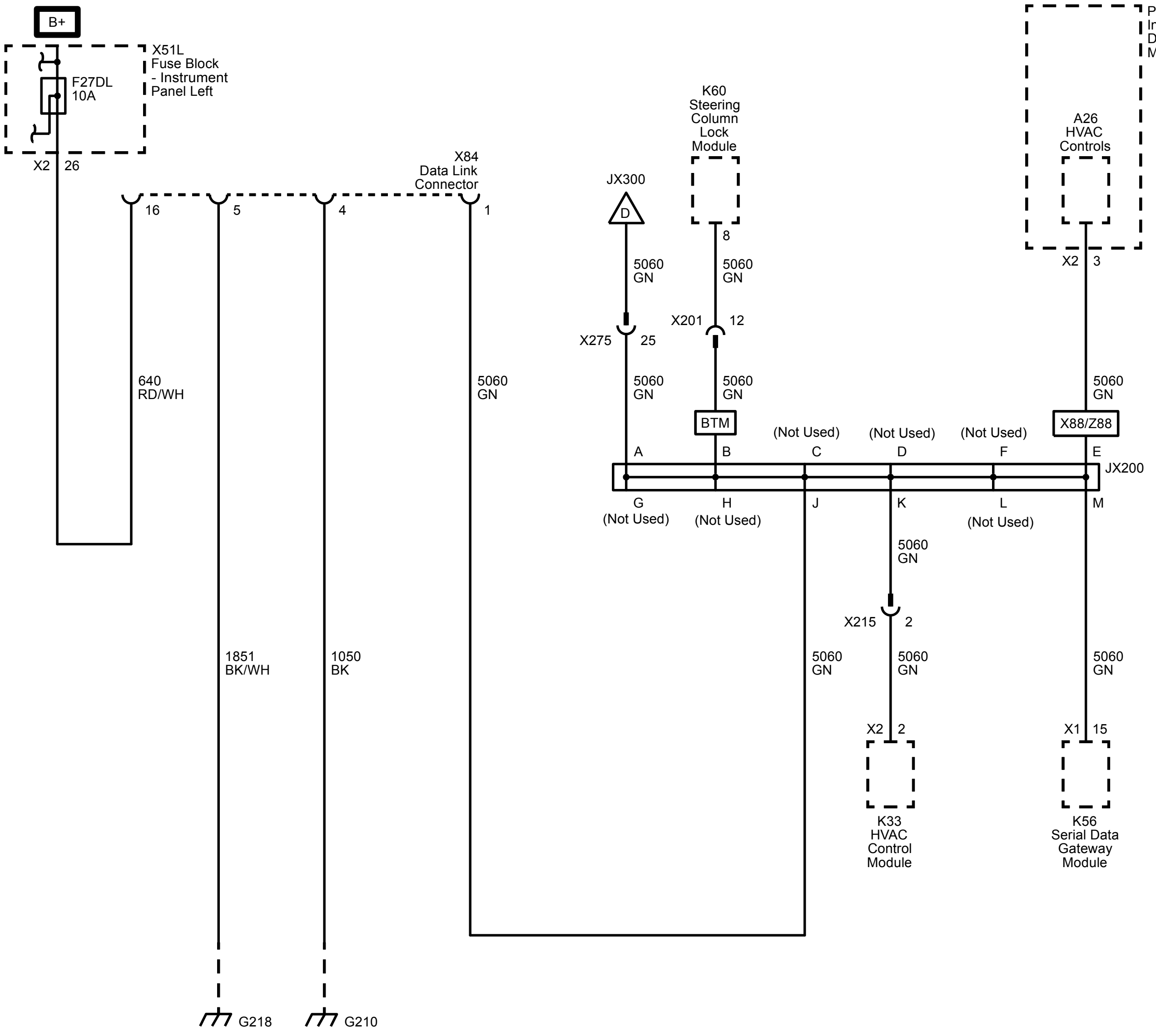
Power and Signal Distribution

Data Communications

Schematic and Routing Diagrams

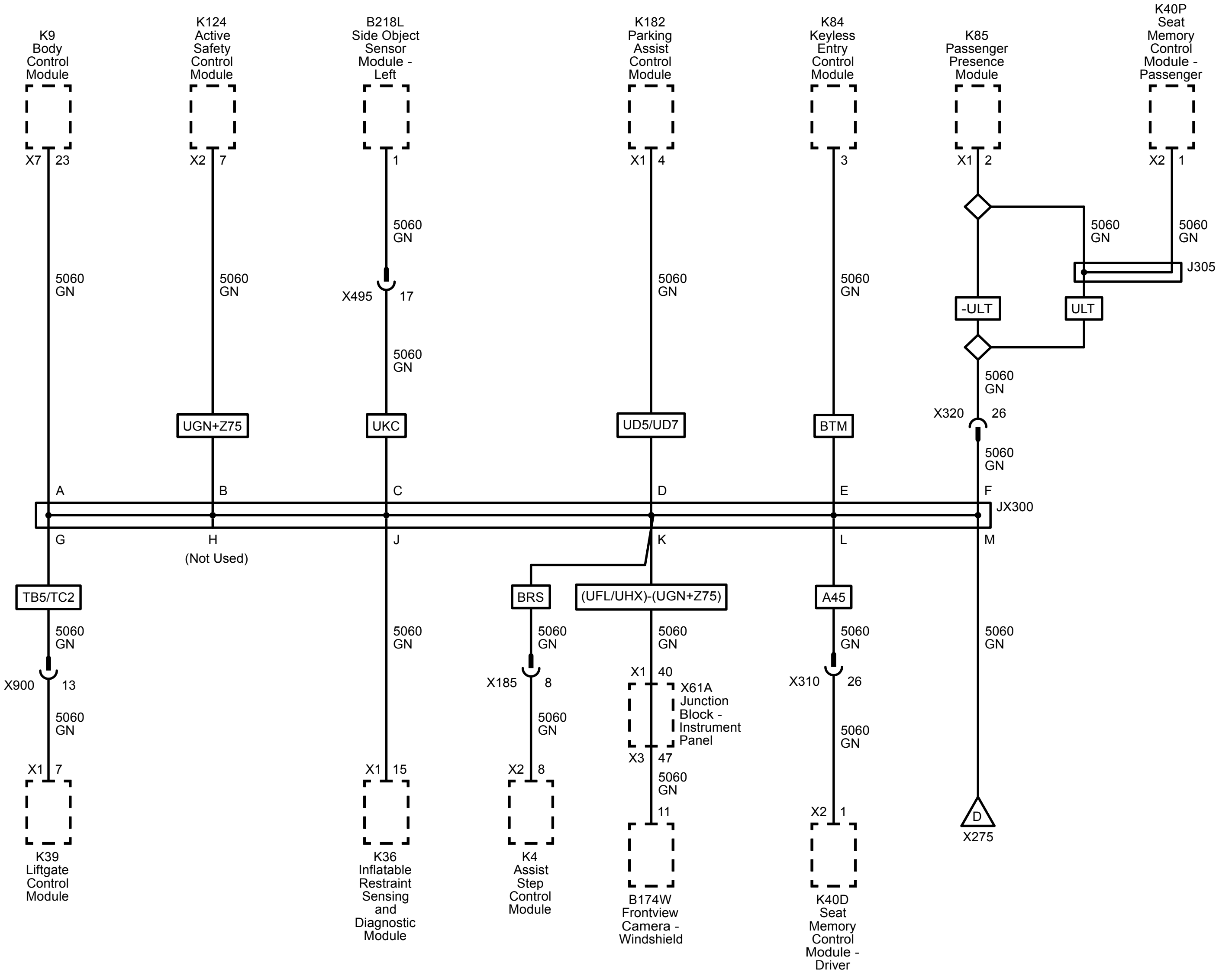
Data Communication Schematics

Data Link Power and Ground, and Low Speed GMLAN (1 of 2)

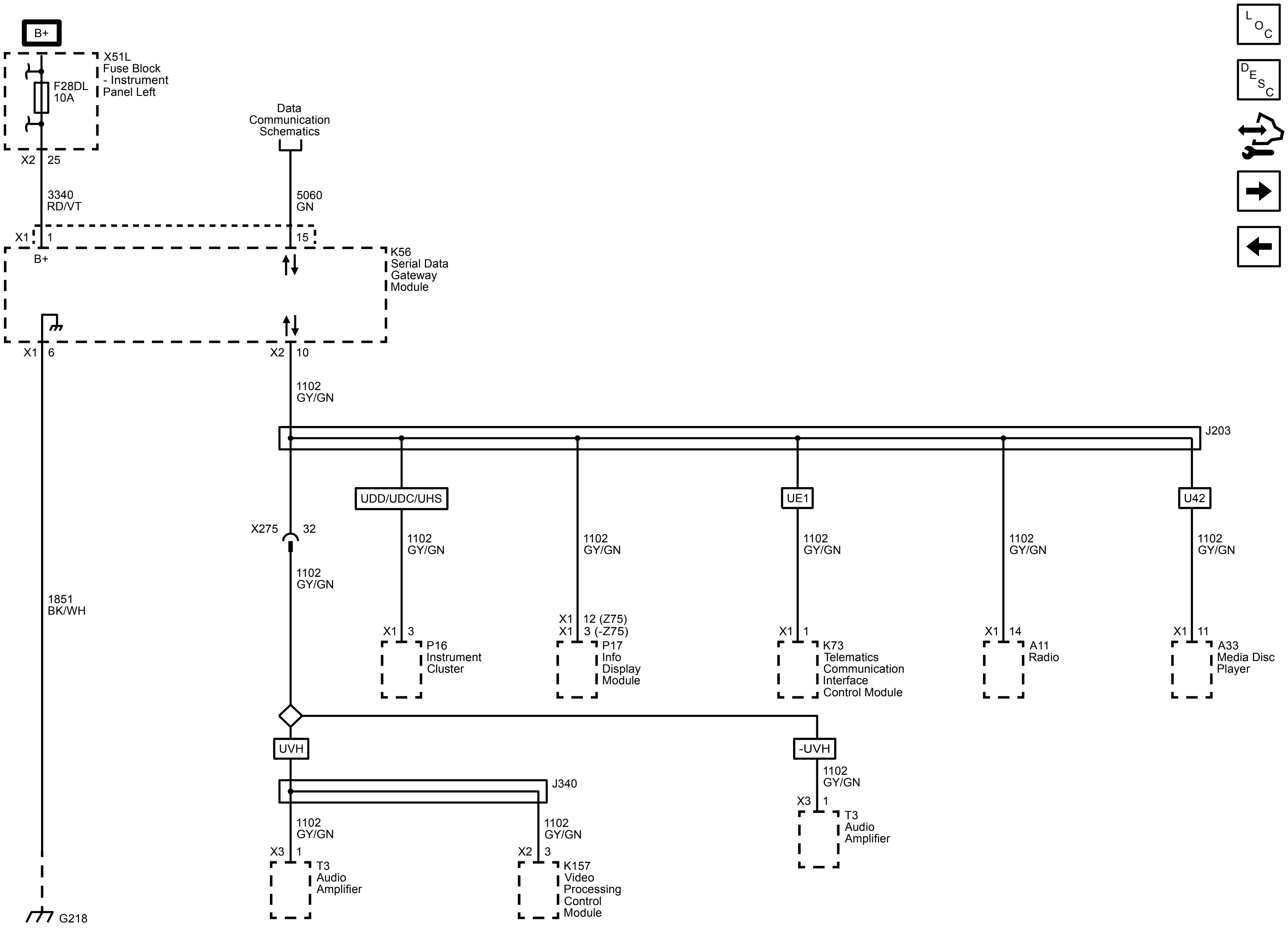


B+
X51L
Fuse Block
- Instrument
Panel Left
F27DL
10A
X2
26
640
RD/WH
X84
Data Link
Connector
16
5
4
1
1851
BK/WH
1050
BK
5060
GN
G218
G210
JX300
D
K60
Steering
Column
Lock
Module
8
5060
GN
X275
25
X201
12
BTM
P17
Info
Display
Module
A26
HVAC
Controls
X2
3
X88/Z88
(Not Used)
A
B
C
D
F
E
JX200
G
H
J
K
L
M
(Not Used)
X215
2
X2
2
K33
HVAC
Control
Module
X1
15
K56
Serial Data
Gateway
Module

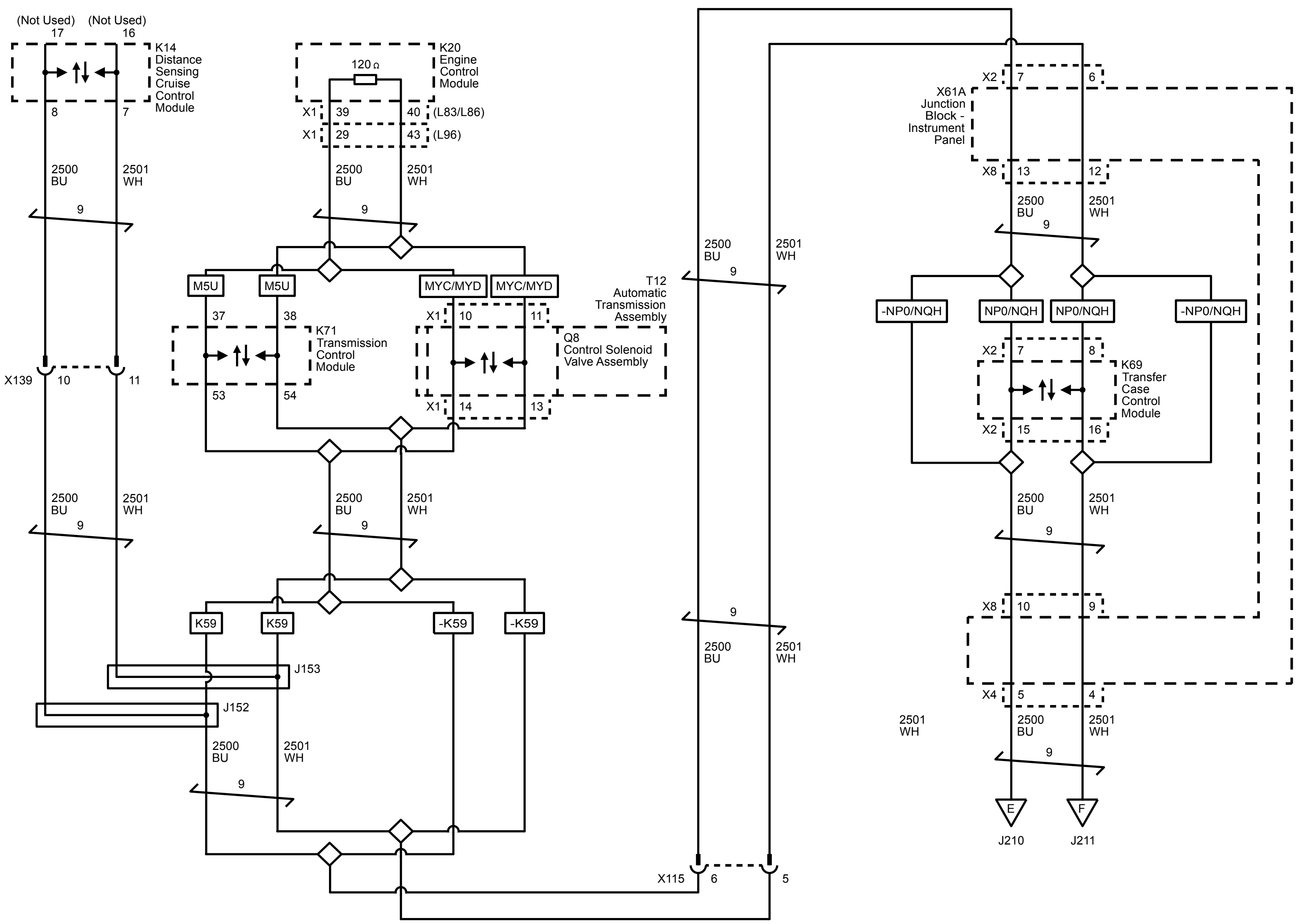
Data Link Power and Ground, and Low Speed GMLAN (2 of 2)


K9 Body Control Module
X7 23
5060 GN
K124 Active Safety Control Module
X2 7
5060 GN
UGN+Z75
B218L Side Object Sensor Module - Left
1
5060 GN
X495 17
5060 GN
UKC
K182 Parking Assist Control Module
X1 4
5060 GN
UD5/UD7
K84 Keyless Entry Control Module
3
5060 GN
BTM
K85 Passenger Presence Module
X1 2
-ULT
ULT
5060 GN
X320 26
5060 GN
K40P Seat Memory Control Module - Passenger
X2 1
5060 GN
5060 GN
J305
A
B
C
D
E
F
JX300
G
H
(Not Used)
J
K
L
M
TB5/TC2
5060 GN
X900 13
5060 GN
X1 7
K39 Liftgate Control Module
5060 GN
X1 15
K36 Inflatable Restraint Sensing and Diagnostic Module
BRS
5060 GN
X185 8
5060 GN
X2 8
K4 Assist Step Control Module
(UFL/UHX)-(UGN+Z75)
5060 GN
X1 40
X61A Junction Block - Instrument Panel
X3 47
5060 GN
11
B174W Frontview Camera - Windshield
A45
5060 GN
X310 26
5060 GN
X2 1
K40D Seat Memory Control Module - Driver
5060 GN
D
X275

Gateway Isolated Low Speed GMLAN

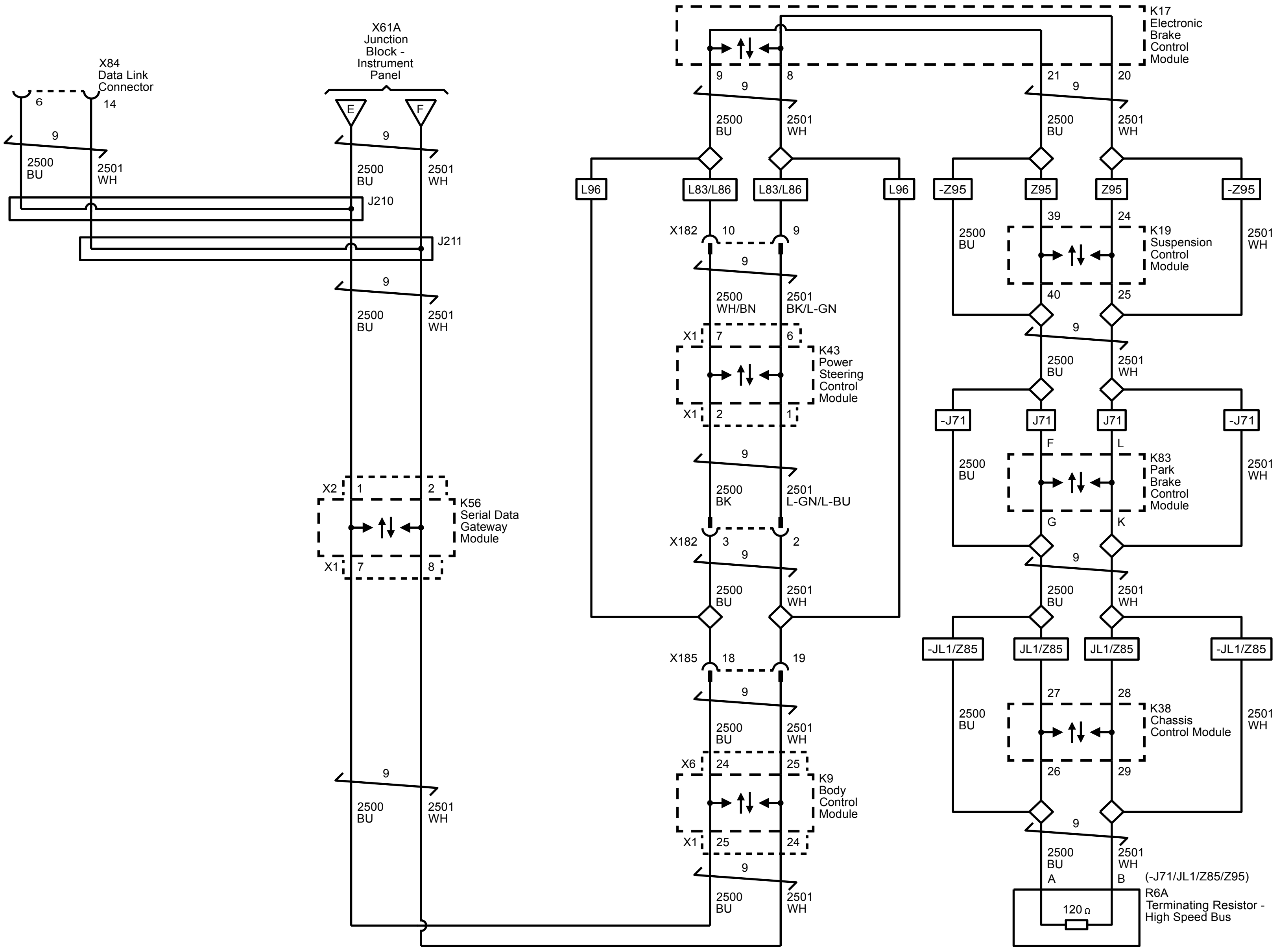

B+
X51L
Fuse Block
- Instrument
Panel Left
F28DL
10A
X2 25
3340
RD/VT
Data
Communication
Schematics
5060
GN
X1 1
15
B+
K56
Serial Data
Gateway
Module
X1 6
X2 10
1102
GY/GN
J203
UDD/UDC/UHS
UE1
U42
X275 32
1102
GY/GN
1851
BK/WH
X1 3
P16
Instrument
Cluster
X1 12 (Z75)
X1 3 (-Z75)
P17
Info
Display
Module
X1 1
K73
Telematics
Communication
Interface
Control Module
X1 14
A11
Radio
X1 11
A33
Media Disc
Player
UVH
-UVH
J340
1102
GY/GN
X3 1
T3
Audio
Amplifier
X2 3
K157
Video
Processing
Control
Module
X3 1
T3
Audio
Amplifier
G218
LOC
DESC

High Speed GMLAN (1 of 2)

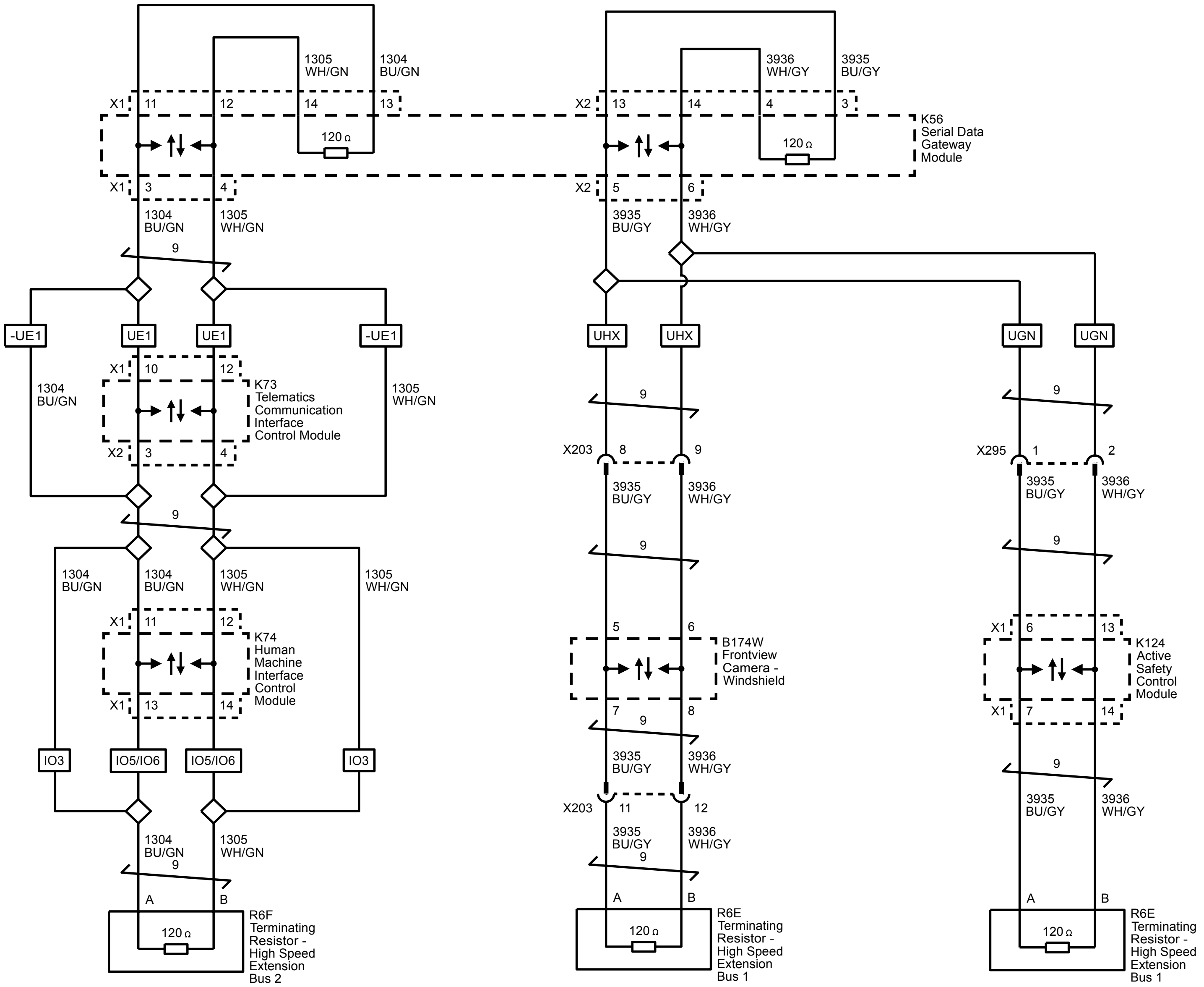

(Not Used)
17
(Not Used)
16
K14
Distance
Sensing
Cruise
Control
Module
8
7
2500
BU
2501
WH
9
120 Ω
K20
Engine
Control
Module
X1
39
40
(L83/L86)
X1
29
43
(L96)
2500
BU
2501
WH
9
M5U
M5U
MYC/MYD
MYC/MYD
T12
Automatic
Transmission
Assembly
37
38
K71
Transmission
Control
Module
53
54
X1
10
11
Q8
Control Solenoid
Valve Assembly
X1
14
13
X139
10
11
2500
BU
2501
WH
9
K59
K59
-K59
-K59
J153
J152
2500
BU
2501
WH
9
2500
BU
2501
WH
9
9
2500
BU
2501
WH
X115
6
5
X2
7
6
X61A
Junction
Block -
Instrument
Panel
X8
13
12
2500
BU
2501
WH
9
-NP0/NQH
NP0/NQH
NP0/NQH
-NP0/NQH
X2
7
8
K69
Transfer
Case
Control
Module
X2
15
16
2500
BU
2501
WH
9
X8
10
9
X4
5
4
2501
WH
2500
BU
2501
WH
9
E
F
J210
J211

LOC
DESC

High Speed GMLAN (2 of 2)

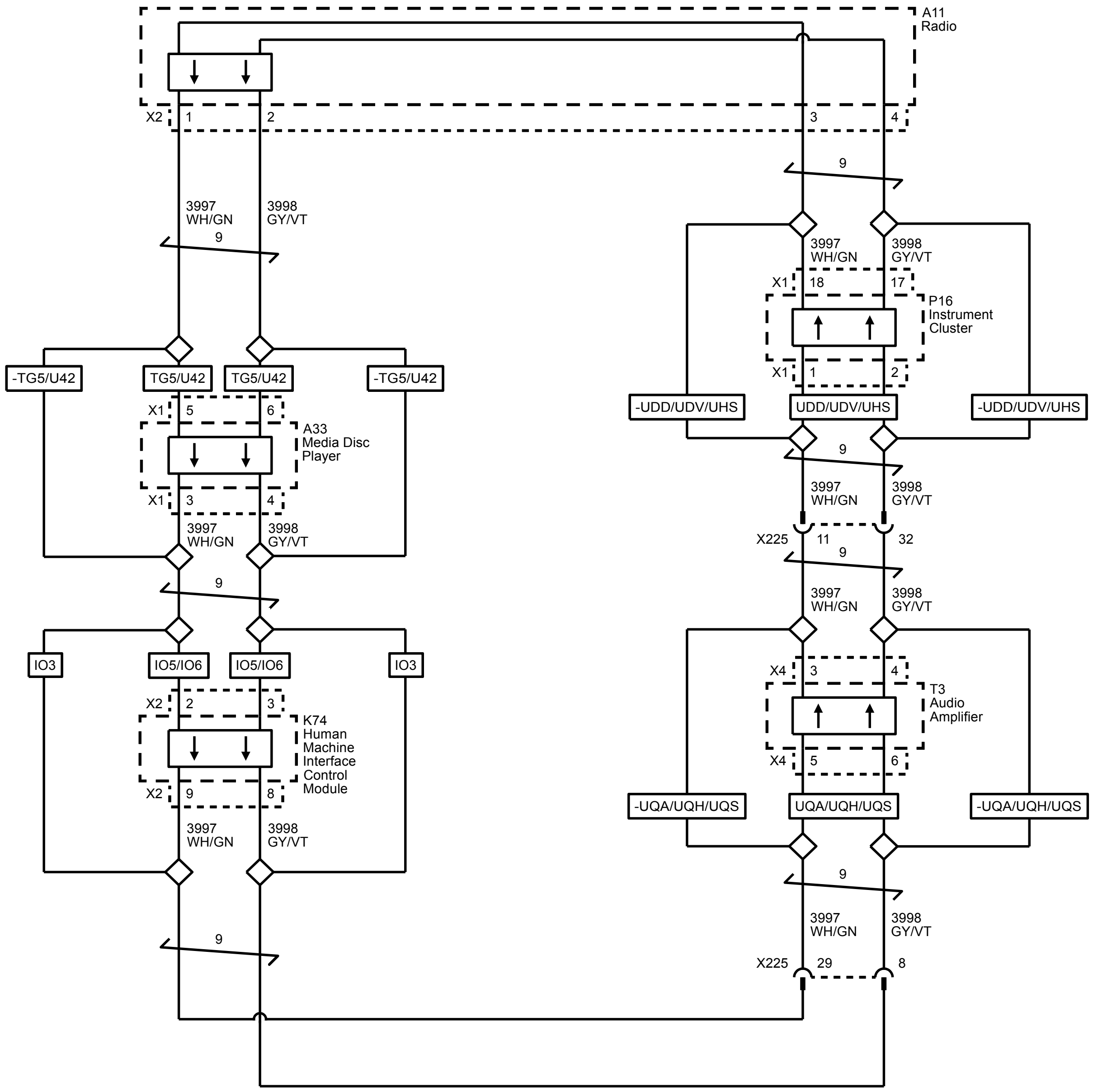

X84
Data Link
Connector
6
14
9
2500
BU
2501
WH
J210
J211
X61A
Junction
Block -
Instrument
Panel
E
F
9
2500
BU
2501
WH
9
2500
BU
2501
WH
X2
1
2
K56
Serial Data
Gateway
Module
X1
7
8
9
2500
BU
2501
WH
K17
Electronic
Brake
Control
Module
9
8
21
20
9
2500
BU
2501
WH
9
2500
BU
2501
WH
L96
L83/L86
L83/L86
L96
X182
10
9
9
2500
WH/BN
2501
BK/L-GN
X1
7
6
K43
Power
Steering
Control
Module
X1
2
1
9
2500
BK
2501
L-GN/L-BU
X182
3
2
9
2500
BU
2501
WH
X185
18
19
9
2500
BU
2501
WH
X6
24
25
K9
Body
Control
Module
X1
25
24
9
2500
BU
2501
WH
-Z95
Z95
Z95
-Z95
39
24
2500
BU
K19
Suspension
Control
Module
2501
WH
40
25
9
2500
BU
2501
WH
-J71
J71
J71
-J71
F
L
2500
BU
K83
Park
Brake
Control
Module
2501
WH
G
K
9
2500
BU
2501
WH
-JL1/Z85
JL1/Z85
JL1/Z85
-JL1/Z85
27
28
2500
BU
K38
Chassis
Control Module
2501
WH
26
29
9
2500
BU
2501
WH
A
B
(-J71/JL1/Z85/Z95)
R6A
Terminating Resistor -
High Speed Bus
120 Ω

Gateway Expansion High Speed GMLAN

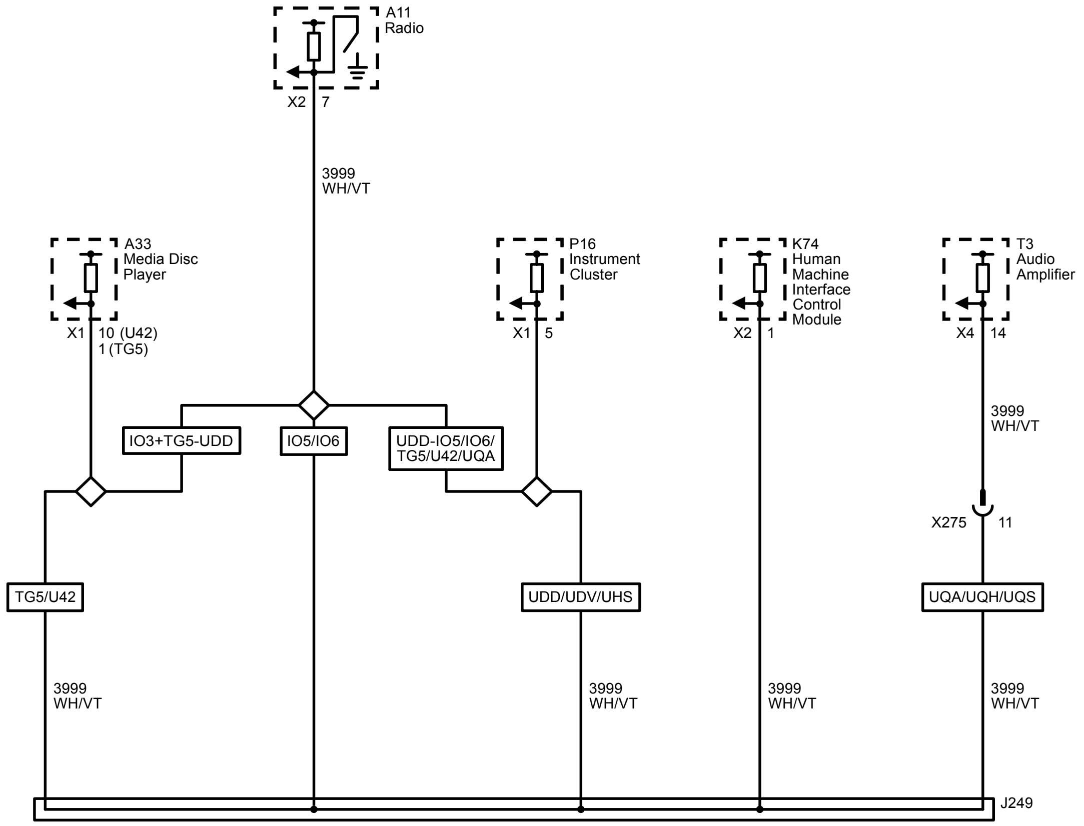


1305 WH/GN
1304 BU/GN
X1 11 12 14 13
120 Ω
X1 3 4
1304 BU/GN
1305 WH/GN
9
-UE1
UE1
UE1
-UE1
X1 10 12
K73 Telematics Communication Interface Control Module
X2 3 4
1304 BU/GN
1305 WH/GN
9
1304 BU/GN
1304 BU/GN
1305 WH/GN
1305 WH/GN
X1 11 12
K74 Human Machine Interface Control Module
X1 13 14
IO3
IO5/IO6
IO5/IO6
IO3
1304 BU/GN
1305 WH/GN
9
A B
120 Ω
R6F Terminating Resistor - High Speed Extension Bus 2
3936 WH/GY
3935 BU/GY
X2 13 14 4 3
120 Ω
K56 Serial Data Gateway Module
X2 5 6
3935 BU/GY
3936 WH/GY
UHX
UHX
UGN
UGN
9
X203 8 9
3935 BU/GY
3936 WH/GY
9
5 6
B174W Frontview Camera - Windshield
7 8
9
3935 BU/GY
3936 WH/GY
X203 11 12
3935 BU/GY
3936 WH/GY
9
A B
120 Ω
R6E Terminating Resistor - High Speed Extension Bus 1
9
X295 1 2
3935 BU/GY
3936 WH/GY
9
X1 6 13
K124 Active Safety Control Module
X1 7 14
9
3935 BU/GY
3936 WH/GY
A B
120 Ω
R6E Terminating Resistor - High Speed Extension Bus 1

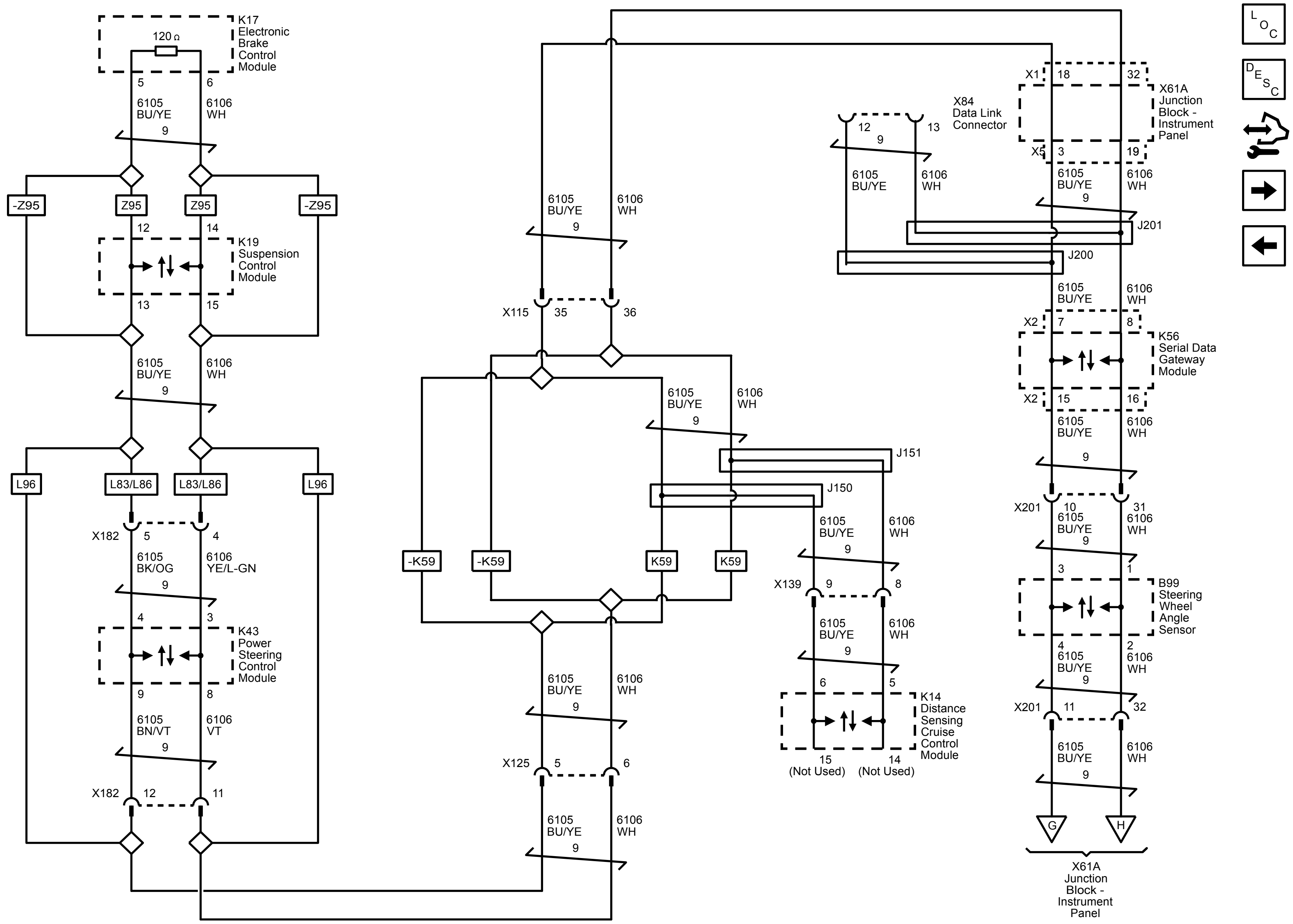
MOST Communication Bus



A11
Radio
X2
1
2
3
4
9
3997
WH/GN
3998
GY/VT
-TG5/U42
TG5/U42
TG5/U42
-TG5/U42
X1
5
6
A33
Media Disc
Player
X1
3
4
IO3
IO5/IO6
IO5/IO6
IO3
X2
2
3
K74
Human
Machine
Interface
Control
Module
X2
9
8
X1
18
17
P16
Instrument
Cluster
X1
1
2
-UDD/UDV/UHS
UDD/UDV/UHS
-UDD/UDV/UHS
X225
11
32
X4
3
4
T3
Audio
Amplifier
X4
5
6
-UQA/UQH/UQS
UQA/UQH/UQS
-UQA/UQH/UQS
X225
29
8


A11
Radio
X2 7
3999
WH/VT
A33
Media Disc
Player
X1 10 (U42)
1 (TG5)
P16
Instrument
Cluster
X1 5
K74
Human
Machine
Interface
Control
Module
X2 1
T3
Audio
Amplifier
X4 14
3999
WH/VT
IO3+TG5-UDD
IO5/IO6
UDD-IO5/IO6/
TG5/U42/UQA
X275 11
TG5/U42
UDD/UDV/UHS
UQA/UQH/UQS
3999
WH/VT
3999
WH/VT
3999
WH/VT
3999
WH/VT
J249

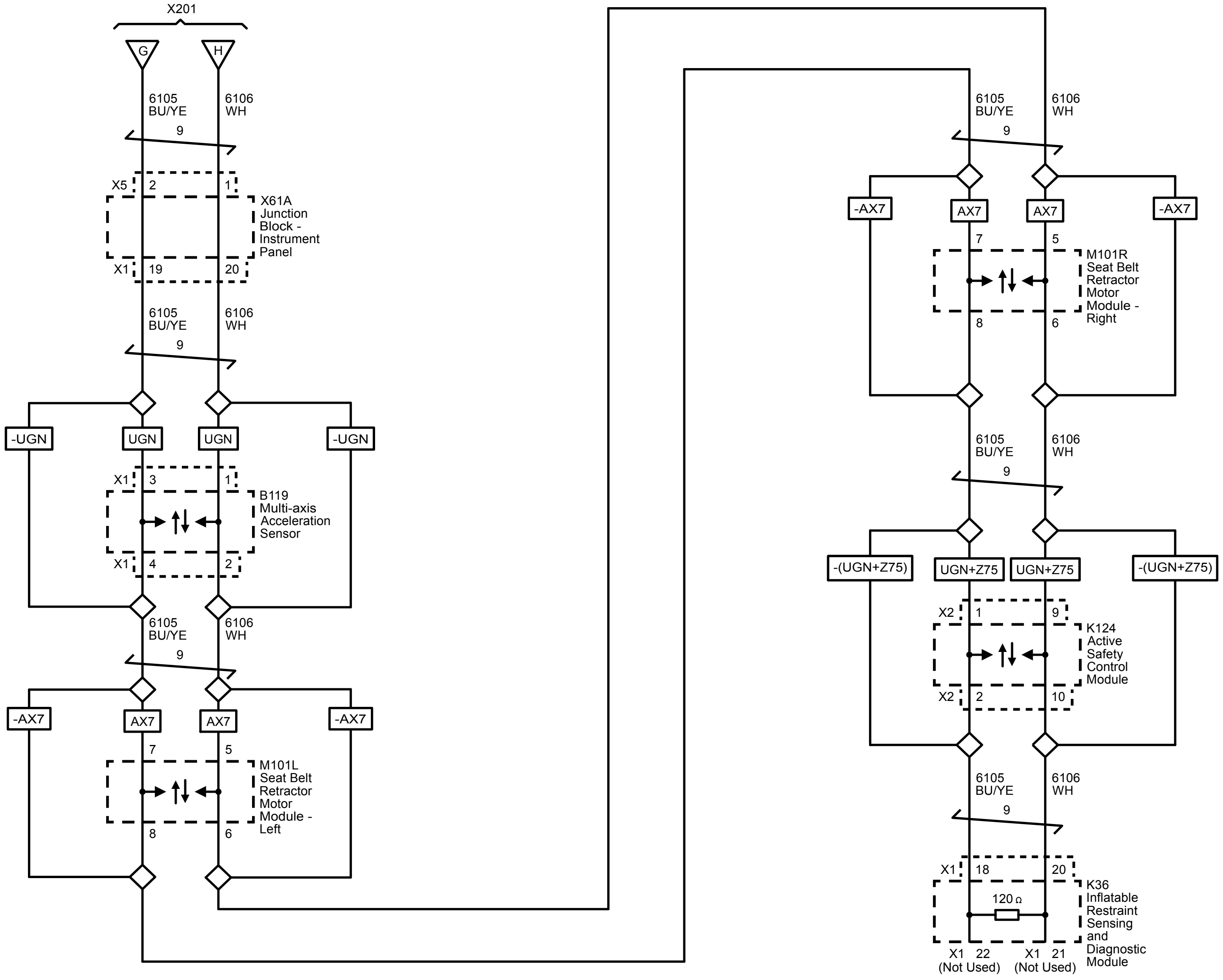
Chassis Expansion Bus (1 of 2)

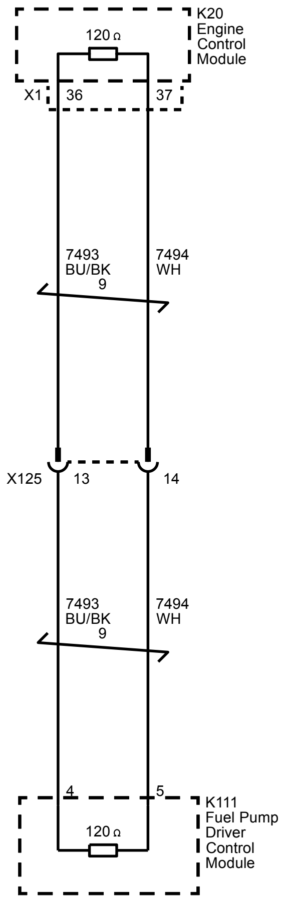


K17 Electronic Brake Control Module
120 Ω
5
6
6105 BU/YE
6106 WH
9
-Z95
Z95
Z95
-Z95
12
14
K19 Suspension Control Module
13
15
6105 BU/YE
6106 WH
9
L96
L83/L86
L83/L86
L96
X182
5
4
6105 BK/OG
6106 YE/L-GN
9
4
3
K43 Power Steering Control Module
9
8
6105 BN/VT
6106 VT
9
X182
12
11
6105 BU/YE
6106 WH
9
X115
35
36
6105 BU/YE
6106 WH
9
-K59
-K59
K59
K59
J151
J150
6105 BU/YE
6106 WH
9
X125
5
6
6105 BU/YE
6106 WH
9
6105 BU/YE
6106 WH
9
X139
9
8
6105 BU/YE
6106 WH
9
6
5
K14 Distance Sensing Cruise Control Module
15 (Not Used)
14 (Not Used)
X84 Data Link Connector
12
13
9
6105 BU/YE
6106 WH
X1
18
32
X61A Junction Block - Instrument Panel
X5
3
19
6105 BU/YE
6106 WH
9
J201
J200
6105 BU/YE
6106 WH
X2
7
8
K56 Serial Data Gateway Module
X2
15
16
6105 BU/YE
6106 WH
9
X201
10
31
6105 BU/YE
6106 WH
9
3
1
B99 Steering Wheel Angle Sensor
4
2
6105 BU/YE
6106 WH
9
X201
11
32
6105 BU/YE
6106 WH
9
G
H
X61A Junction Block - Instrument Panel
LOC
DESC

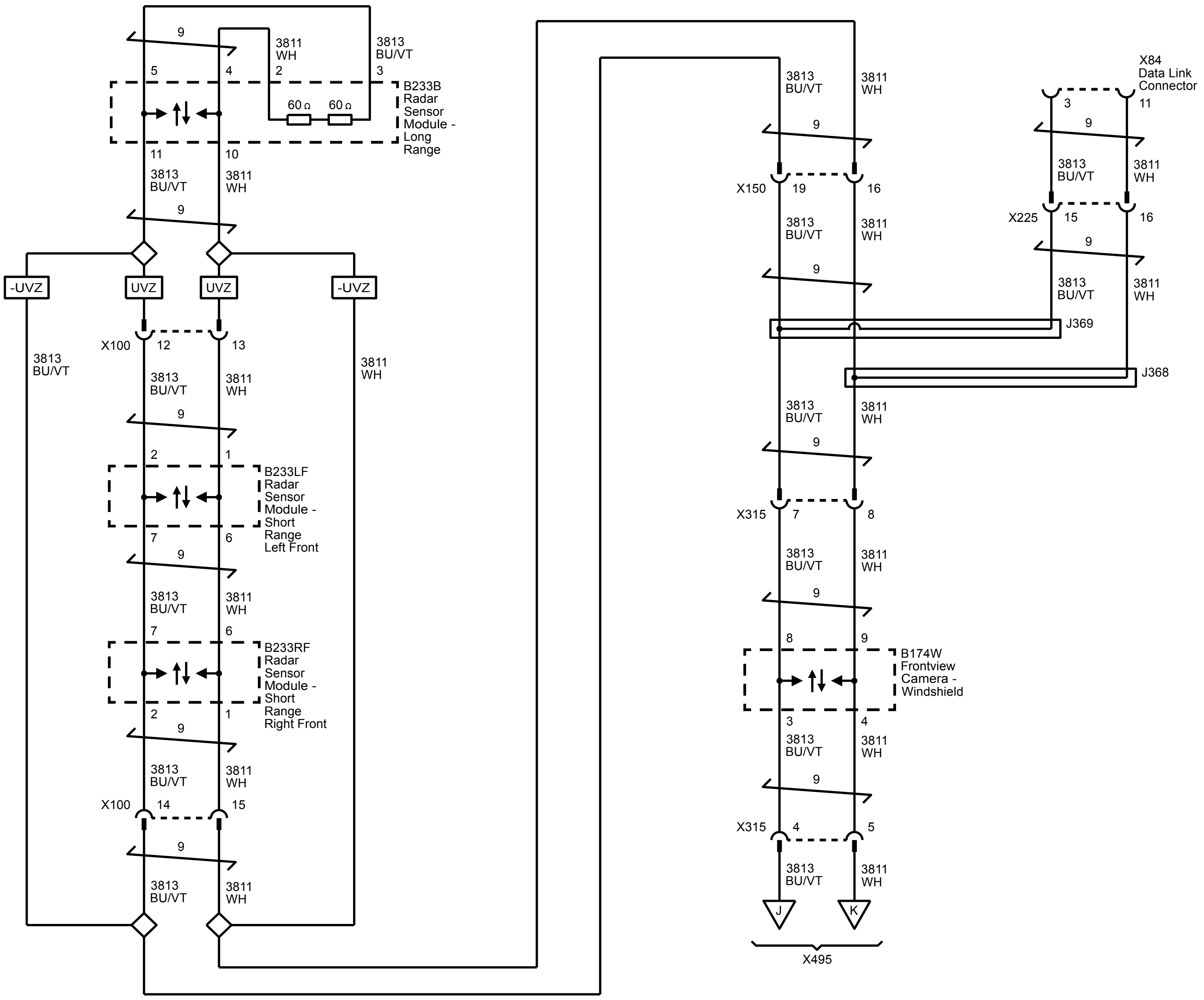
Chassis Expansion Bus (2 of 2)

LOC
DESC

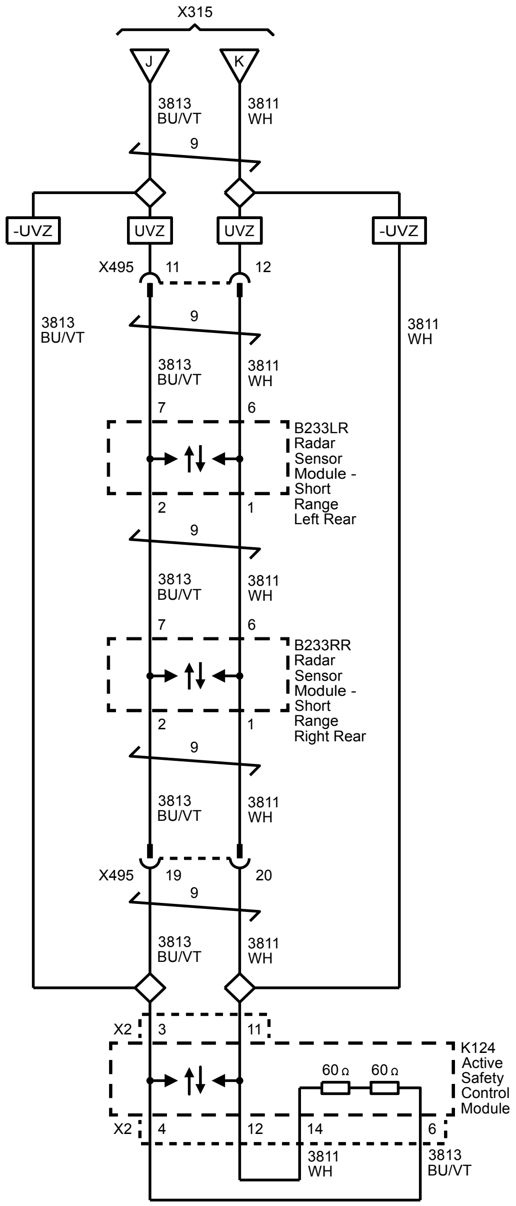

X201
G
H
6105
BU/YE
6106
WH
9
X5
2
1
X61A
Junction
Block -
Instrument
Panel
X1
19
20
6105
BU/YE
6106
WH
9
-UGN
UGN
UGN
-UGN
X1
3
1
B119
Multi-axis
Acceleration
Sensor
X1
4
2
6105
BU/YE
6106
WH
9
-AX7
AX7
AX7
-AX7
7
5
M101L
Seat Belt
Retractor
Motor
Module -
Left
8
6
6105
BU/YE
6106
WH
9
-AX7
AX7
AX7
-AX7
7
5
M101R
Seat Belt
Retractor
Motor
Module -
Right
8
6
6105
BU/YE
6106
WH
9
-(UGN+Z75)
UGN+Z75
UGN+Z75
-(UGN+Z75)
X2
1
9
K124
Active
Safety
Control
Module
X2
2
10
6105
BU/YE
6106
WH
9
X1
18
20
120 Ω
K36
Inflatable
Restraint
Sensing
and
Diagnostic
Module
X1 22
(Not Used)
X1 21
(Not Used)


K20
Engine
Control
Module
120 Ω
X1
36
37
7493
BU/BK
9
7494
WH
X125
13
14
7493
BU/BK
9
7494
WH
4
5
K111
Fuel Pump
Driver
Control
Module
120 Ω

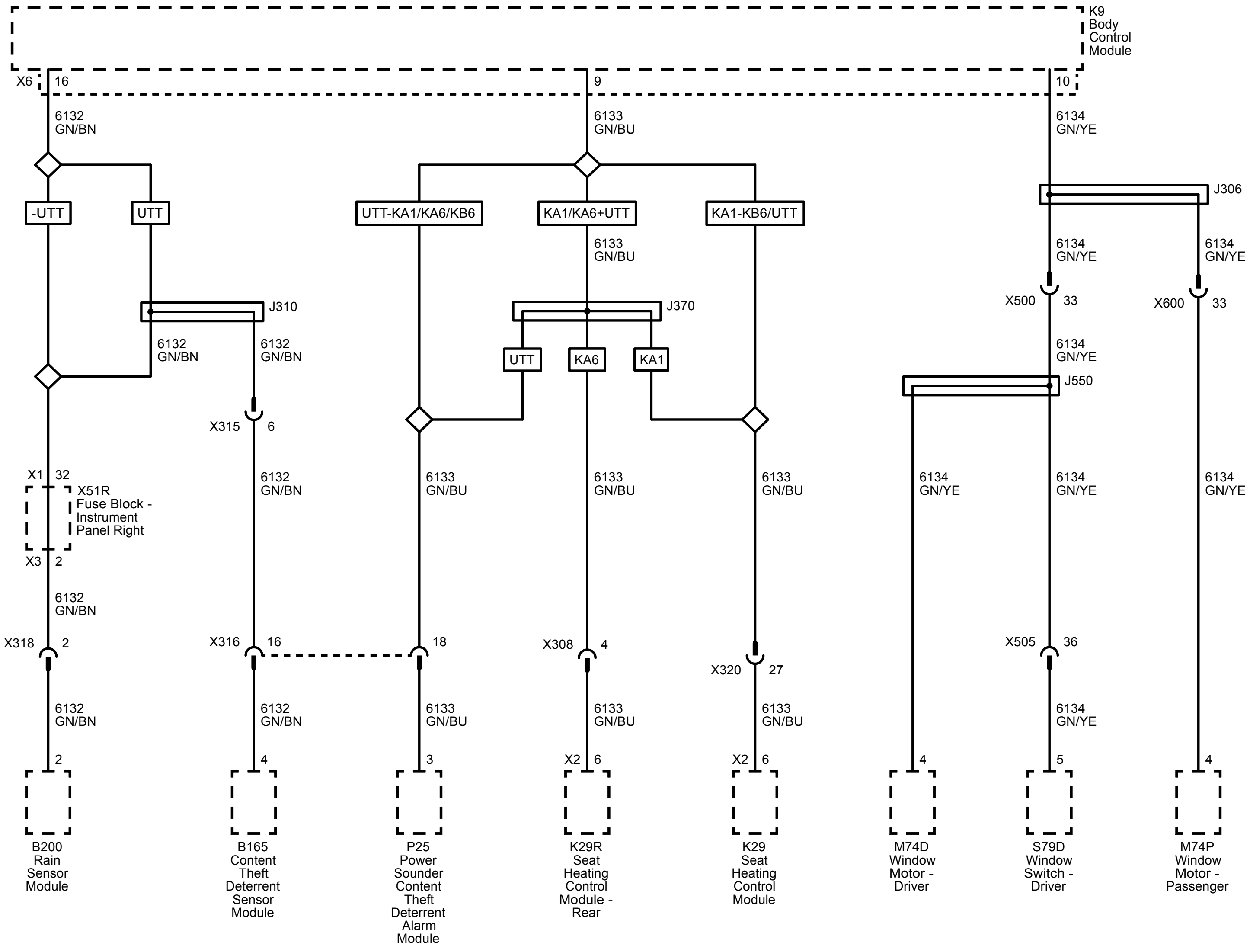
Object Detection Bus (UGN+Z75) (1 of 2)



9
3811 WH
3813 BU/VT
5
4
2
3
60 Ω
60 Ω
B233B Radar Sensor Module - Long Range
11
10
3813 BU/VT
3811 WH
9
-UVZ
UVZ
UVZ
-UVZ
X100
12
13
3813 BU/VT
3813 BU/VT
3811 WH
3811 WH
9
2
1
B233LF Radar Sensor Module - Short Range Left Front
7
6
9
3813 BU/VT
3811 WH
7
6
B233RF Radar Sensor Module - Short Range Right Front
2
1
9
3813 BU/VT
3811 WH
X100
14
15
9
3813 BU/VT
3811 WH
3813 BU/VT
3811 WH
9
X150
19
16
3813 BU/VT
3811 WH
9
X84 Data Link Connector
3
11
9
3813 BU/VT
3811 WH
X225
15
16
9
3813 BU/VT
3811 WH
J369
J368
3813 BU/VT
3811 WH
9
X315
7
8
3813 BU/VT
3811 WH
9
8
9
B174W Frontview Camera - Windshield
3
4
3813 BU/VT
3811 WH
9
X315
4
5
3813 BU/VT
3811 WH
J
K
X495

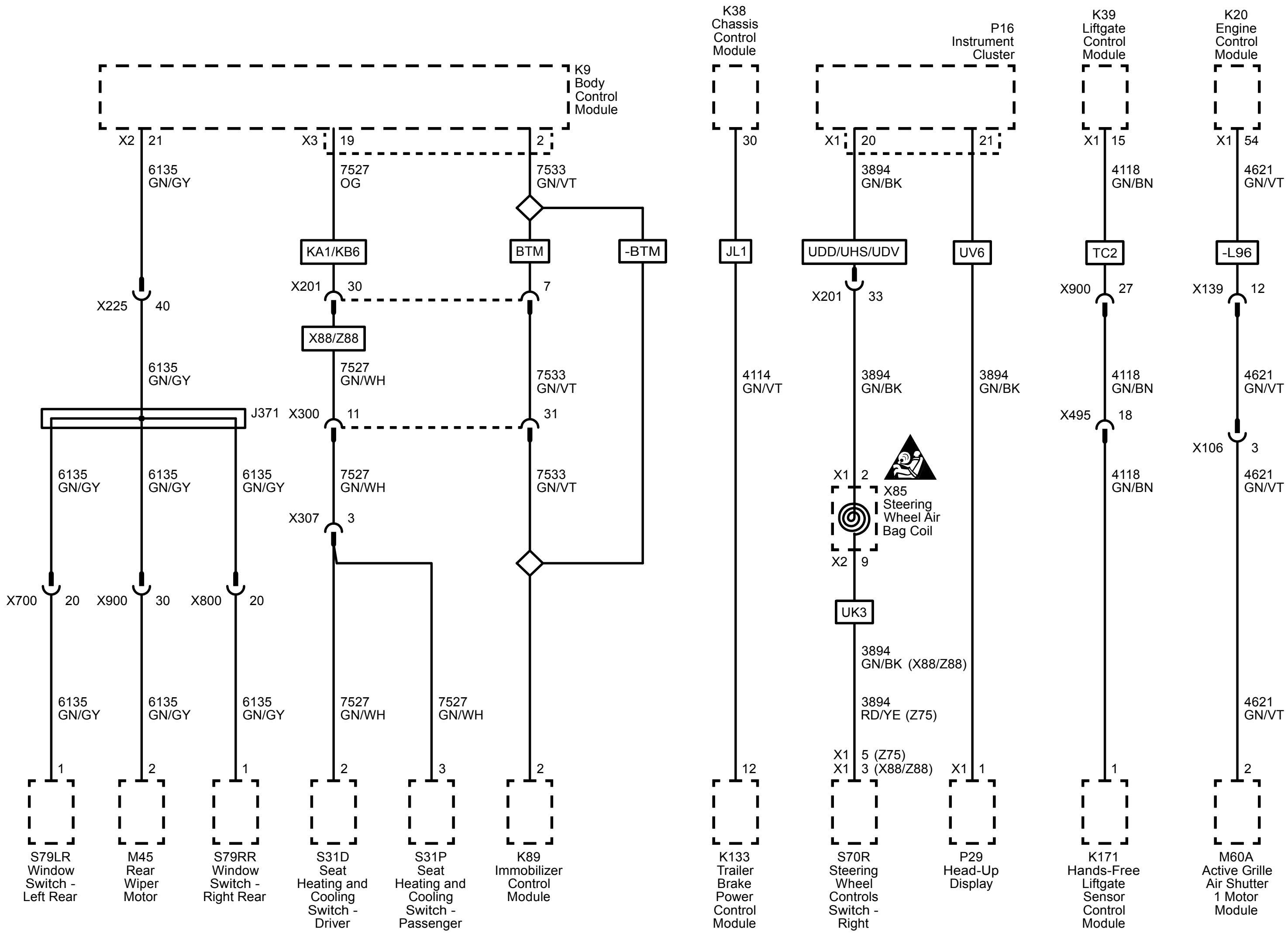

X315
J
K
3813
BU/VT
3811
WH
9
-UVZ
UVZ
UVZ
-UVZ
X495
11
12
3813
BU/VT
3811
WH
7
6
B233LR
Radar
Sensor
Module -
Short
Range
Left Rear
2
1
B233RR
Radar
Sensor
Module -
Short
Range
Right Rear
X495
19
20
X2
3
11
K124
Active
Safety
Control
Module
60 Ω
60 Ω
X2
4
12
14
6
3811
WH
3813
BU/VT

Linear Interconnect Network (LIN) Busses (1 of 3)

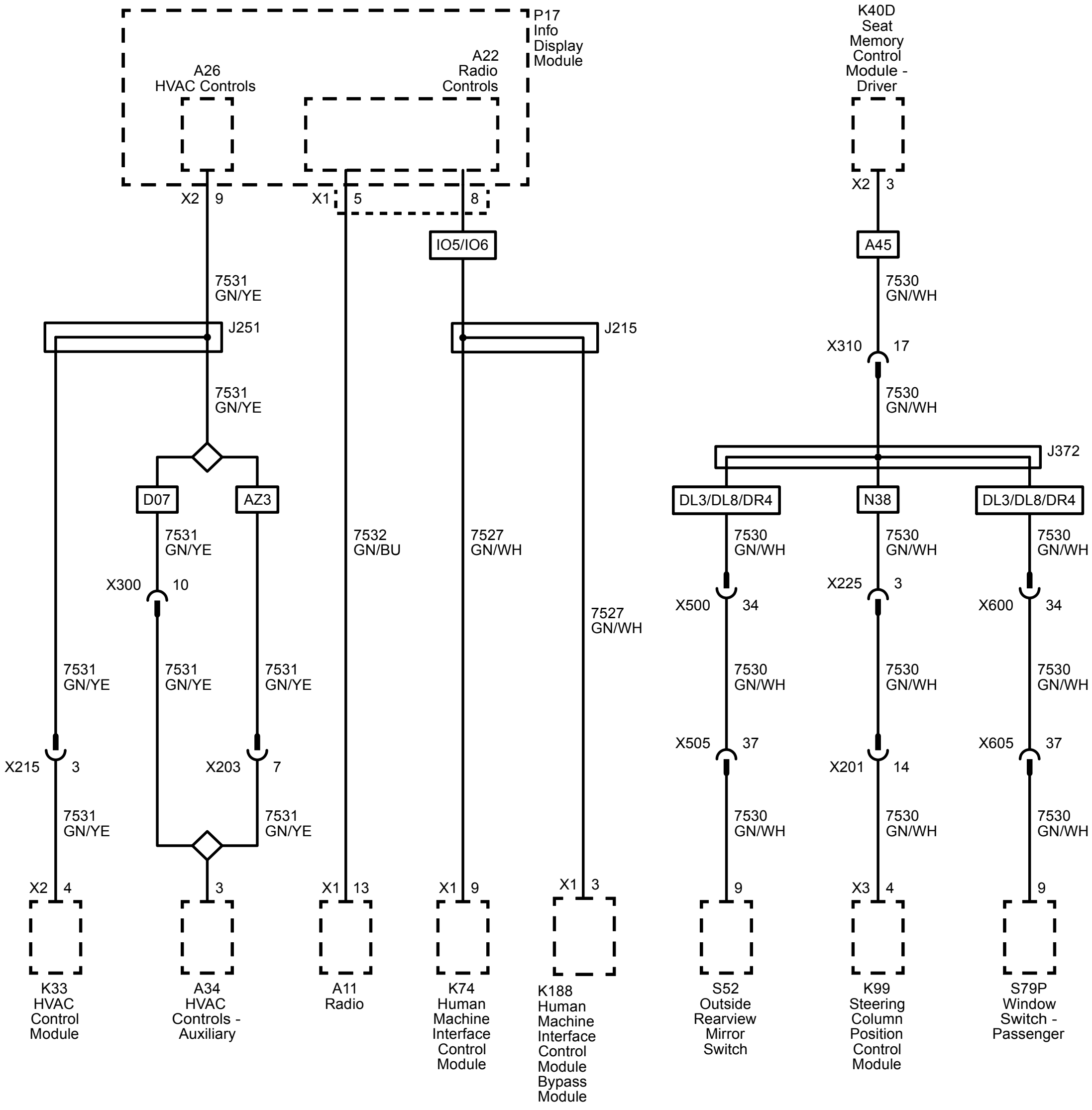

K9
Body
Control
Module
X6
16
9
10
6132
GN/BN
6133
GN/BU
6134
GN/YE
-UTT
UTT
UTT-KA1/KA6/KB6
KA1/KA6+UTT
KA1-KB6/UTT
J306
6133
GN/BU
6134
GN/YE
6134
GN/YE
J310
J370
X500
33
X600
33
6132
GN/BN
6132
GN/BN
UTT
KA6
KA1
6134
GN/YE
J550
X315
6
X1
32
X51R
Fuse Block -
Instrument
Panel Right
6132
GN/BN
6133
GN/BU
6133
GN/BU
6133
GN/BU
6134
GN/YE
6134
GN/YE
6134
GN/YE
X3
2
6132
GN/BN
X318
2
X316
16
18
X308
4
X320
27
X505
36
6132
GN/BN
6132
GN/BN
6133
GN/BU
6133
GN/BU
6133
GN/BU
6134
GN/YE
2
4
3
X2
6
X2
6
4
5
4
B200
Rain
Sensor
Module
B165
Content
Theft
Deterrent
Sensor
Module
P25
Power
Sounder
Content
Theft
Deterrent
Alarm
Module
K29R
Seat
Heating
Control
Module -
Rear
K29
Seat
Heating
Control
Module
M74D
Window
Motor -
Driver
S79D
Window
Switch -
Driver
M74P
Window
Motor -
Passenger

Linear Interconnect Network (LIN) Busses (2 of 3)

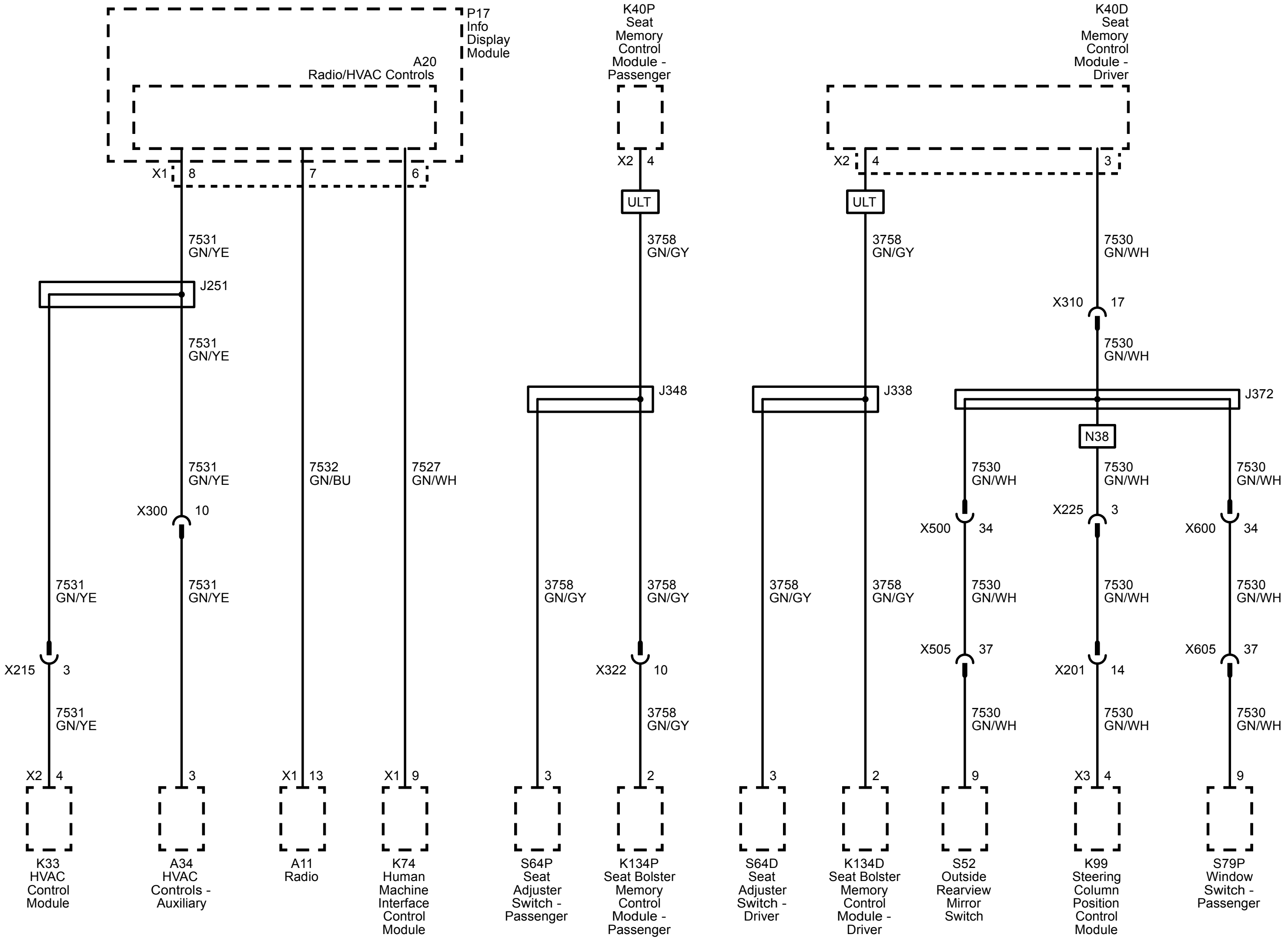
LOC
DESC


K9
Body
Control
Module
K38
Chassis
Control
Module
P16
Instrument
Cluster
K39
Liftgate
Control
Module
K20
Engine
Control
Module
X2 21
6135
GN/GY
X3 19
7527
OG
2
7533
GN/VT
30
X1 20
3894
GN/BK
21
X1 15
4118
GN/BN
X1 54
4621
GN/VT
KA1/KB6
BTM
-BTM
JL1
UDD/UHS/UDV
UV6
TC2
-L96
X225 40
X201 30
7
X201 33
X900 27
X139 12
X88/Z88
6135
GN/GY
7527
GN/WH
7533
GN/VT
4114
GN/VT
3894
GN/BK
3894
GN/BK
4118
GN/BN
4621
GN/VT
J371
X300 11
31
X495 18
X106 3
6135
GN/GY
6135
GN/GY
6135
GN/GY
7527
GN/WH
7533
GN/VT
X1 2
X85
Steering
Wheel Air
Bag Coil
X2 9
4118
GN/BN
4621
GN/VT
X307 3
X700 20
X900 30
X800 20
UK3
3894
GN/BK (X88/Z88)
3894
RD/YE (Z75)
6135
GN/GY
6135
GN/GY
6135
GN/GY
7527
GN/WH
7527
GN/WH
4621
GN/VT
1
2
1
2
3
2
12
X1 5 (Z75)
X1 3 (X88/Z88)
X1 1
1
2
S79LR
Window
Switch -
Left Rear
M45
Rear
Wiper
Motor
S79RR
Window
Switch -
Right Rear
S31D
Seat
Heating and
Cooling
Switch -
Driver
S31P
Seat
Heating and
Cooling
Switch -
Passenger
K89
Immobilizer
Control
Module
K133
Trailer
Brake
Power
Control
Module
S70R
Steering
Wheel
Controls
Switch -
Right
P29
Head-Up
Display
K171
Hands-Free
Liftgate
Sensor
Control
Module
M60A
Active Grille
Air Shutter
1 Motor
Module

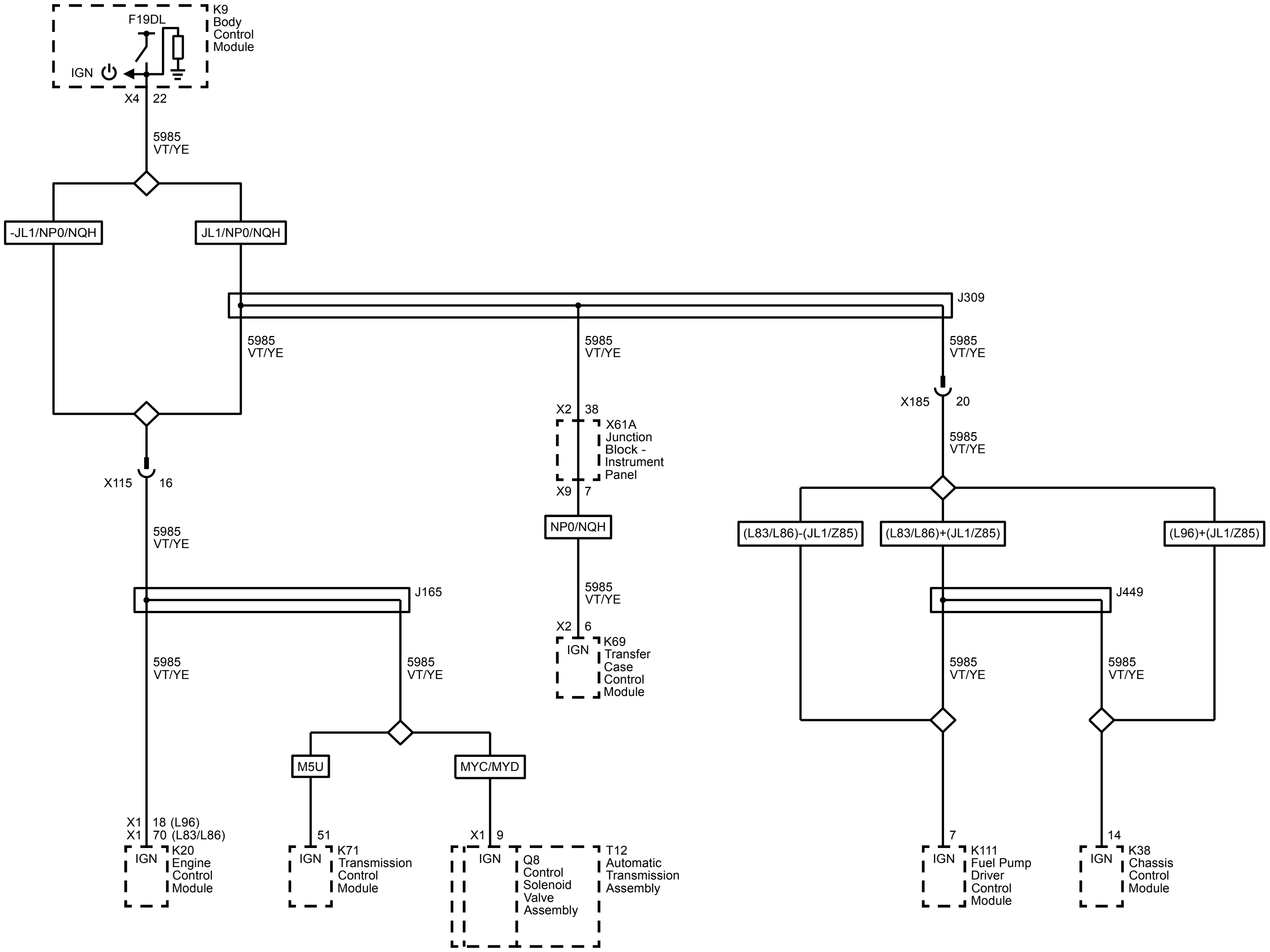
Linear Interconnect Network (LIN) Busses (3 of 3) (X88 or Z88)

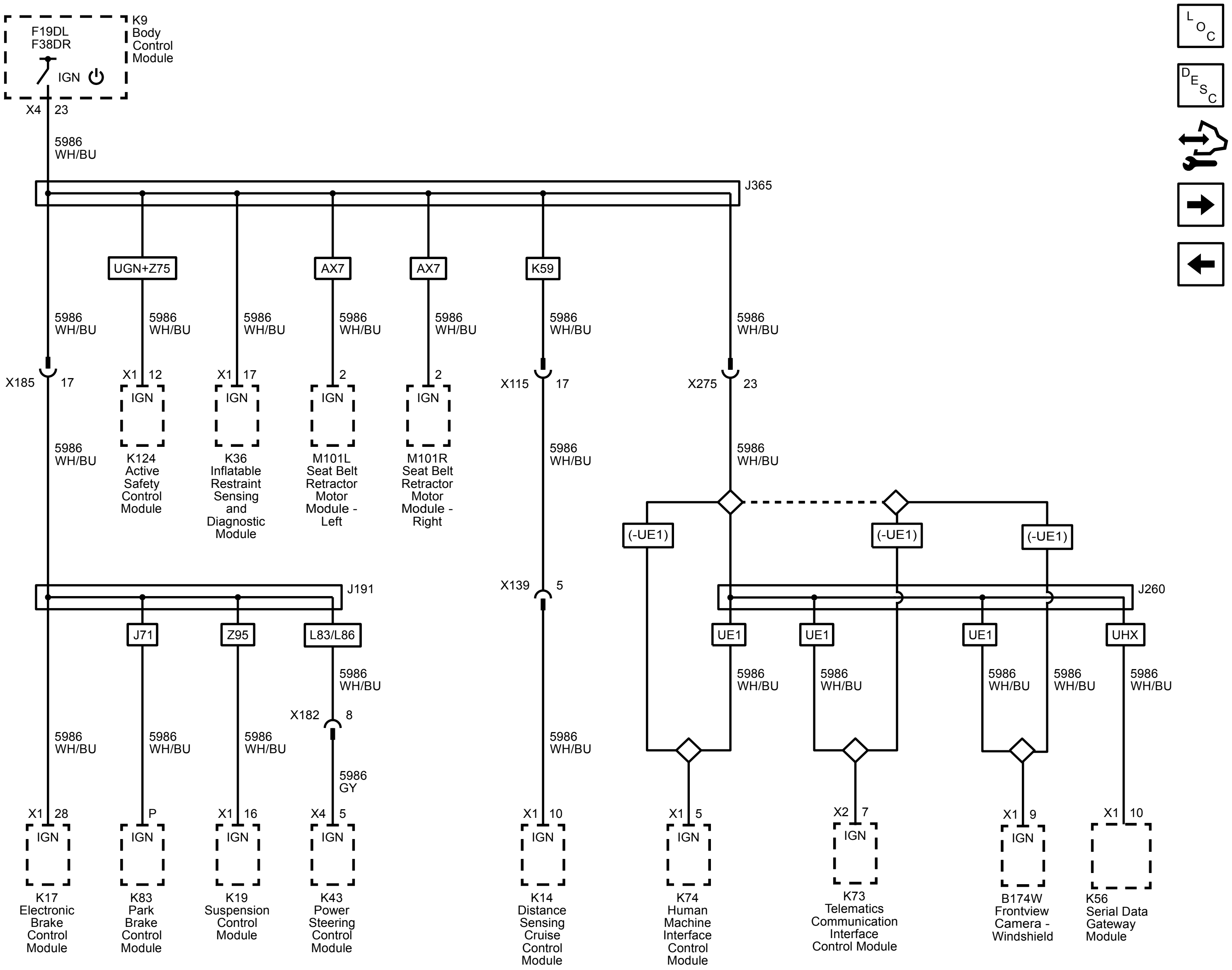

P17
Info
Display
Module
A26
HVAC Controls
A22
Radio
Controls
X2 9
X1 5
8
IO5/IO6
7531
GN/YE
J251
J215
7531
GN/YE
D07
AZ3
7531
GN/YE
X300 10
7532
GN/BU
7527
GN/WH
7527
GN/WH
7531
GN/YE
7531
GN/YE
7531
GN/YE
X215 3
X203 7
7531
GN/YE
7531
GN/YE
X2 4
3
X1 13
X1 9
X1 3
K33
HVAC
Control
Module
A34
HVAC
Controls -
Auxiliary
A11
Radio
K74
Human
Machine
Interface
Control
Module
K188
Human
Machine
Interface
Control
Module
Bypass
Module
K40D
Seat
Memory
Control
Module -
Driver
X2 3
A45
7530
GN/WH
X310 17
7530
GN/WH
J372
DL3/DL8/DR4
N38
DL3/DL8/DR4
7530
GN/WH
7530
GN/WH
7530
GN/WH
X500 34
X225 3
X600 34
7530
GN/WH
7530
GN/WH
7530
GN/WH
X505 37
X201 14
X605 37
7530
GN/WH
7530
GN/WH
7530
GN/WH
9
X3 4
9
S52
Outside
Rearview
Mirror
Switch
K99
Steering
Column
Position
Control
Module
S79P
Window
Switch -
Passenger

Linear Interconnect Network (LIN) Busses (3 of 3) (Z75)

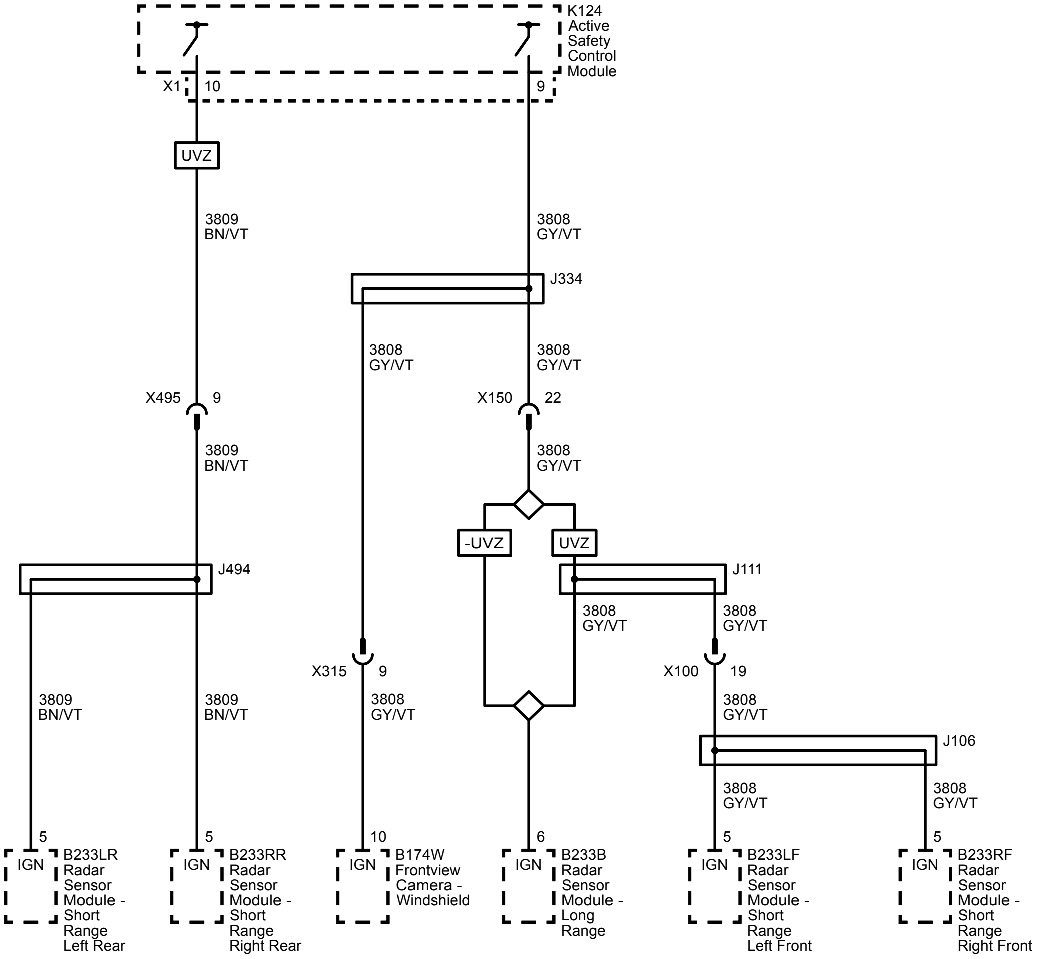

P17 Info Display Module
A20 Radio/HVAC Controls
X1 8
7
6
7531 GN/YE
J251
7531 GN/YE
7531 GN/YE
X300 10
7531 GN/YE
7531 GN/YE
X215 3
7531 GN/YE
7532 GN/BU
7527 GN/WH
X2 4
3
X1 13
X1 9
K33 HVAC Control Module
A34 HVAC Controls - Auxiliary
A11 Radio
K74 Human Machine Interface Control Module
K40P Seat Memory Control Module - Passenger
X2 4
ULT
3758 GN/GY
J348
3758 GN/GY
3758 GN/GY
X322 10
3758 GN/GY
3
2
S64P Seat Adjuster Switch - Passenger
K134P Seat Bolster Memory Control Module - Passenger
K40D Seat Memory Control Module - Driver
X2 4
3
ULT
3758 GN/GY
J338
3758 GN/GY
3758 GN/GY
3
2
S64D Seat Adjuster Switch - Driver
K134D Seat Bolster Memory Control Module - Driver
7530 GN/WH
X310 17
7530 GN/WH
J372
N38
7530 GN/WH
7530 GN/WH
7530 GN/WH
X500 34
X225 3
X600 34
7530 GN/WH
7530 GN/WH
7530 GN/WH
X505 37
X201 14
X605 37
7530 GN/WH
7530 GN/WH
7530 GN/WH
9
X3 4
9
S52 Outside Rearview Mirror Switch
K99 Steering Column Position Control Module
S79P Window Switch - Passenger

Accessory Wakeup


K9
Body
Control
Module
F19DL
IGN
X4
22
5985
VT/YE
-JL1/NP0/NQH
JL1/NP0/NQH
J309
5985
VT/YE
5985
VT/YE
5985
VT/YE
X185
20
X2
38
X61A
Junction
Block -
Instrument
Panel
X9
7
NP0/NQH
5985
VT/YE
X2
6
IGN
K69
Transfer
Case
Control
Module
X115
16
5985
VT/YE
J165
5985
VT/YE
5985
VT/YE
M5U
MYC/MYD
X1
18 (L96)
X1
70 (L83/L86)
IGN
K20
Engine
Control
Module
51
IGN
K71
Transmission
Control
Module
X1
9
IGN
Q8
Control
Solenoid
Valve
Assembly
T12
Automatic
Transmission
Assembly
5985
VT/YE
(L83/L86)-(JL1/Z85)
(L83/L86)+(JL1/Z85)
(L96)+(JL1/Z85)
J449
5985
VT/YE
5985
VT/YE
7
IGN
K111
Fuel Pump
Driver
Control
Module
14
IGN
K38
Chassis
Control
Module

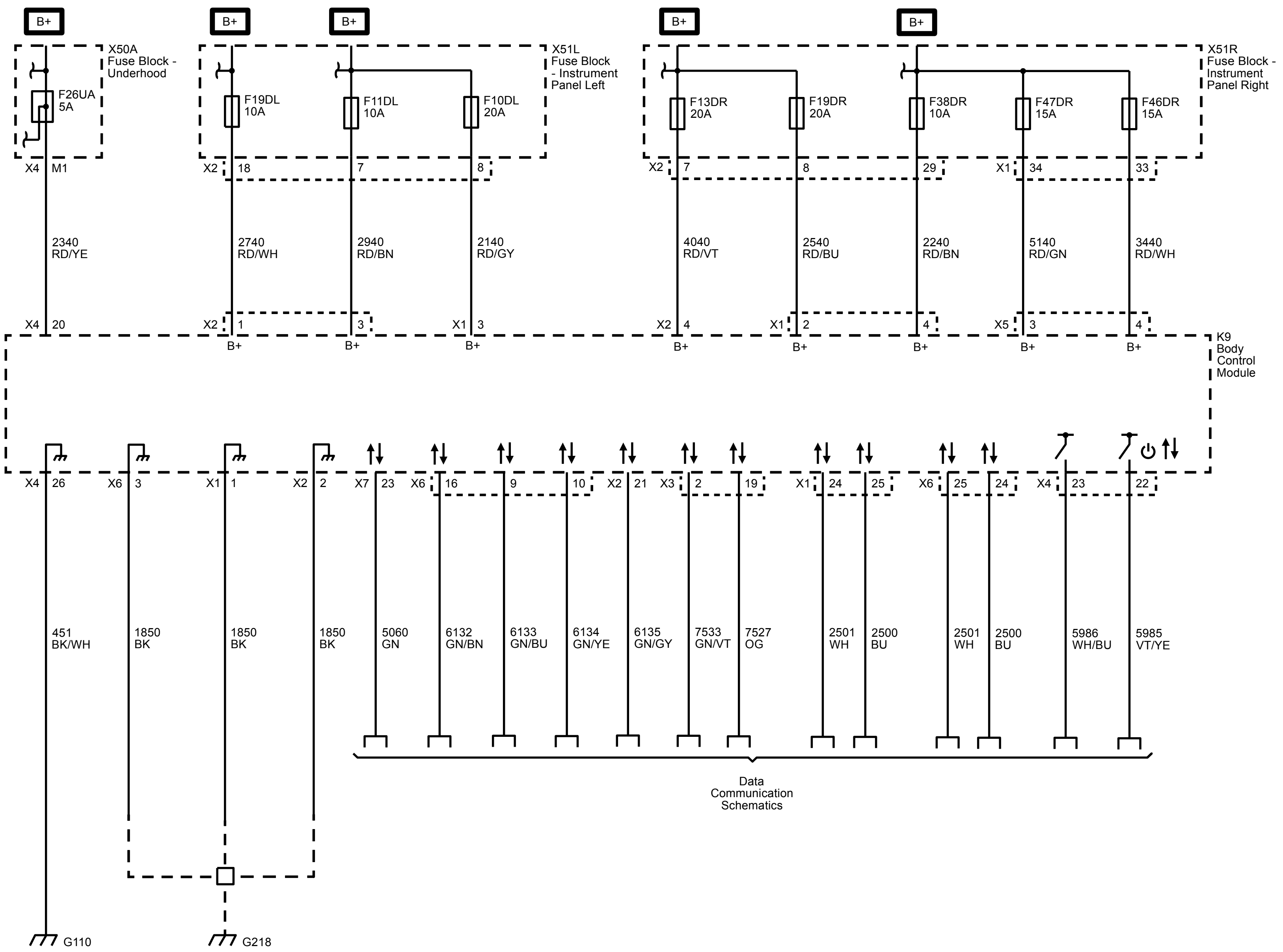

K9
Body
Control
Module
F19DL
F38DR
IGN
X4 23
5986
WH/BU
J365
UGN+Z75
AX7
AX7
K59
X185 17
X1 12
X1 17
2
2
X115 17
X275 23
K124
Active
Safety
Control
Module
K36
Inflatable
Restraint
Sensing
and
Diagnostic
Module
M101L
Seat Belt
Retractor
Motor
Module -
Left
M101R
Seat Belt
Retractor
Motor
Module -
Right
(-UE1)
(-UE1)
(-UE1)
J191
J71
Z95
L83/L86
X182 8
5986
GY
X139 5
J260
UE1
UE1
UE1
UHX
X1 28
P
X1 16
X4 5
X1 10
X1 5
X2 7
X1 9
X1 10
K17
Electronic
Brake
Control
Module
K83
Park
Brake
Control
Module
K19
Suspension
Control
Module
K43
Power
Steering
Control
Module
K14
Distance
Sensing
Cruise
Control
Module
K74
Human
Machine
Interface
Control
Module
K73
Telematics
Communication
Interface
Control Module
B174W
Frontview
Camera -
Windshield
K56
Serial Data
Gateway
Module
LOC
DESC

Communications Enable - Object High Speed GMLAN (UGN)

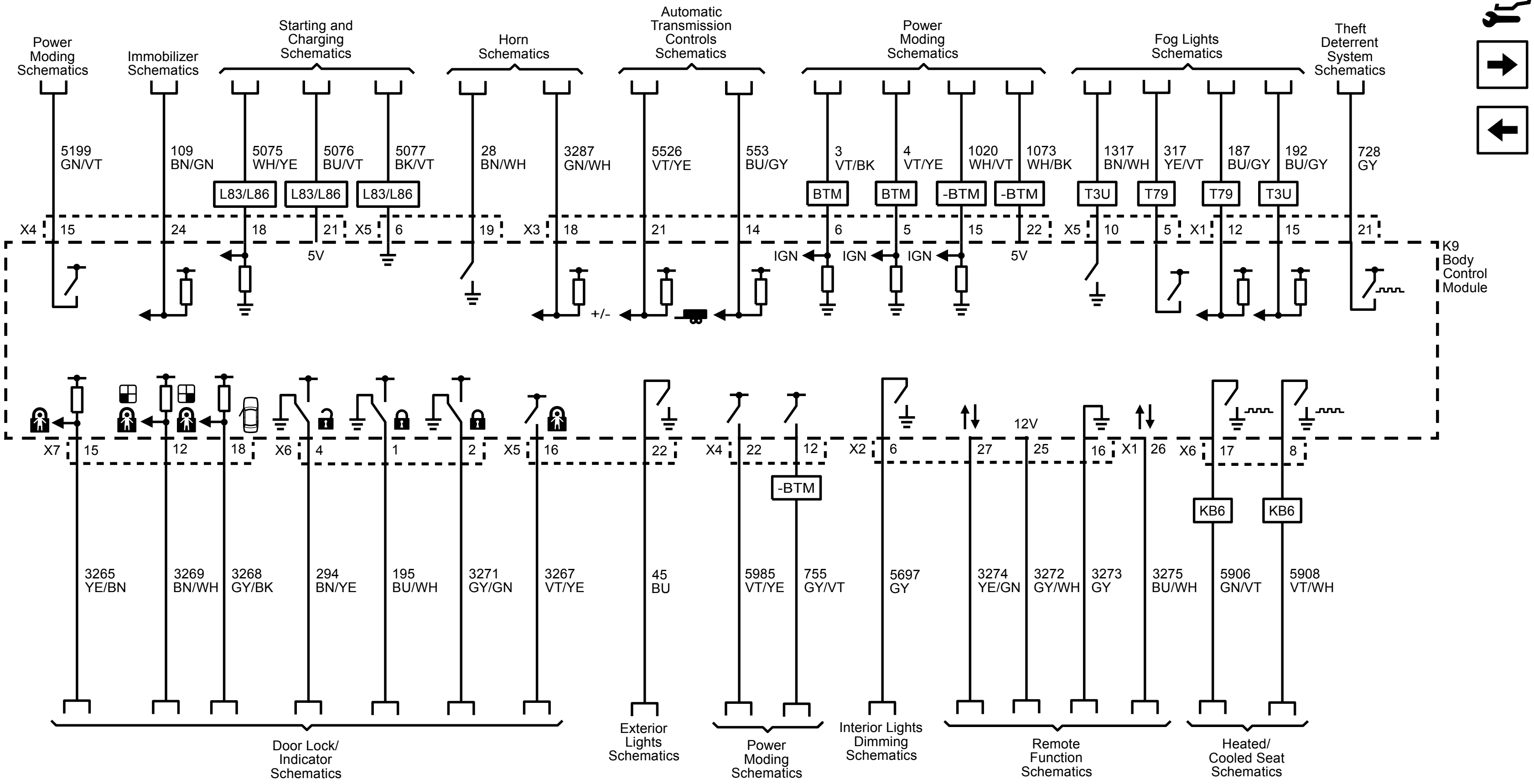

K124
Active
Safety
Control
Module
X1
10
9
UVZ
3809
BN/VT
3808
GY/VT
J334
3808
GY/VT
3808
GY/VT
X495
9
X150
22
3809
BN/VT
3808
GY/VT
-UVZ
UVZ
J494
J111
3808
GY/VT
3808
GY/VT
X315
9
X100
19
3809
BN/VT
3809
BN/VT
3808
GY/VT
3808
GY/VT
J106
3808
GY/VT
3808
GY/VT
5
IGN
B233LR
Radar
Sensor
Module -
Short
Range
Left Rear
5
IGN
B233RR
Radar
Sensor
Module -
Short
Range
Right Rear
10
IGN
B174W
Frontview
Camera -
Windshield
6
IGN
B233B
Radar
Sensor
Module -
Long
Range
5
IGN
B233LF
Radar
Sensor
Module -
Short
Range
Left Front
5
IGN
B233RF
Radar
Sensor
Module -
Short
Range
Right Front

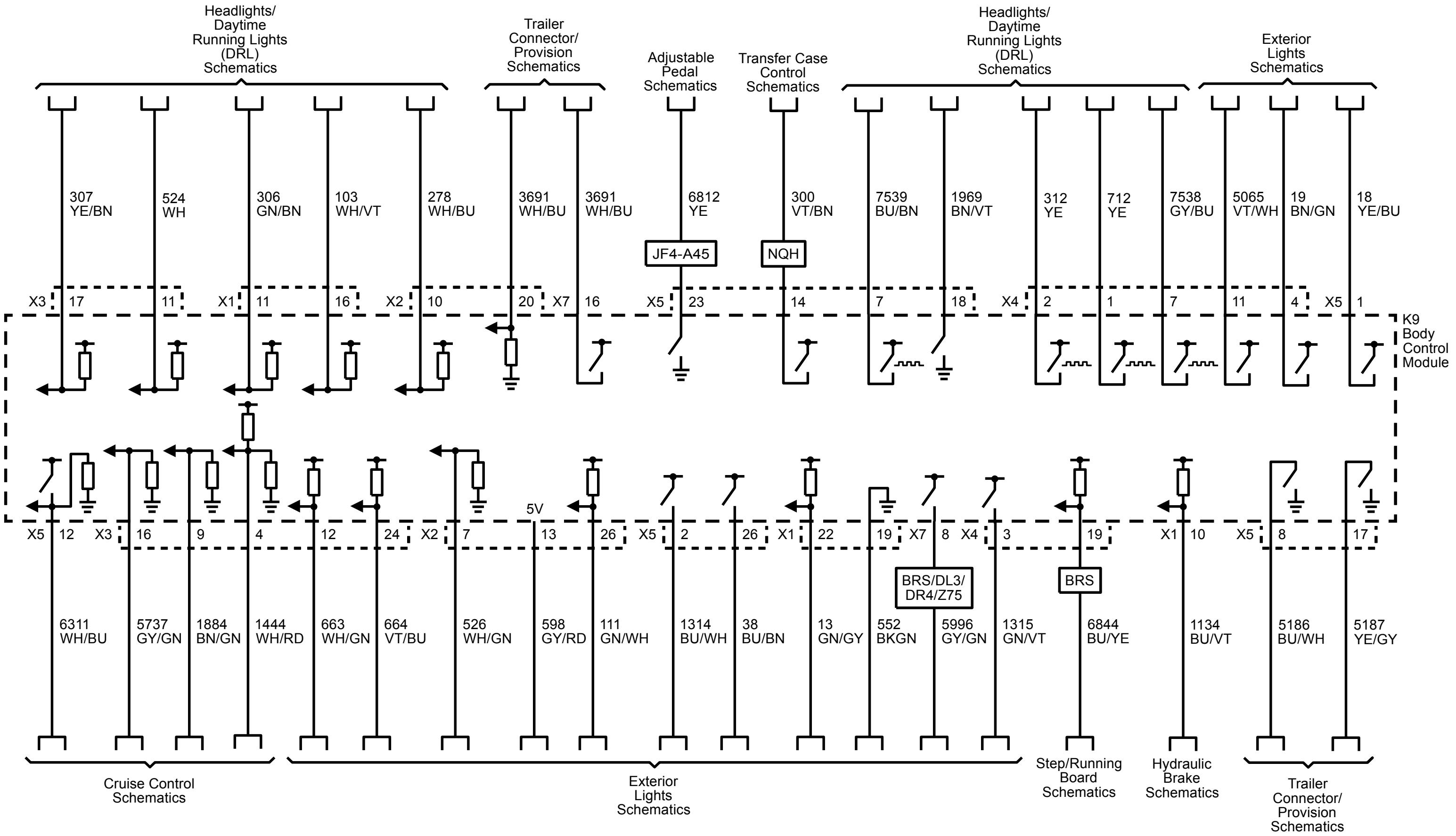
Body Control System Schematics

Module Power, Ground and Serial Data


B+
B+
B+
B+
B+
X50A
Fuse Block -
Underhood
F26UA
5A
X4
M1
X51L
Fuse Block
- Instrument
Panel Left
F19DL
10A
F11DL
10A
F10DL
20A
X2
18
7
8
X51R
Fuse Block -
Instrument
Panel Right
F13DR
20A
F19DR
20A
F38DR
10A
F47DR
15A
F46DR
15A
X2
7
8
29
X1
34
33
2340
RD/YE
2740
RD/WH
2940
RD/BN
2140
RD/GY
4040
RD/VT
2540
RD/BU
2240
RD/BN
5140
RD/GN
3440
RD/WH
X4
20
X2
1
3
X1
3
X2
4
X1
2
4
X5
3
4
B+
B+
B+
B+
B+
B+
B+
B+
K9
Body
Control
Module
X4
26
X6
3
X1
1
X2
2
X7
23
X6
16
9
10
X2
21
X3
2
19
X1
24
25
X6
25
24
X4
23
22
451
BK/WH
1850
BK
1850
BK
1850
BK
5060
GN
6132
GN/BN
6133
GN/BU
6134
GN/YE
6135
GN/GY
7533
GN/VT
7527
OG
2501
WH
2500
BU
2501
WH
2500
BU
5986
WH/BU
5985
VT/YE
Data
Communication
Schematics
G110
G218

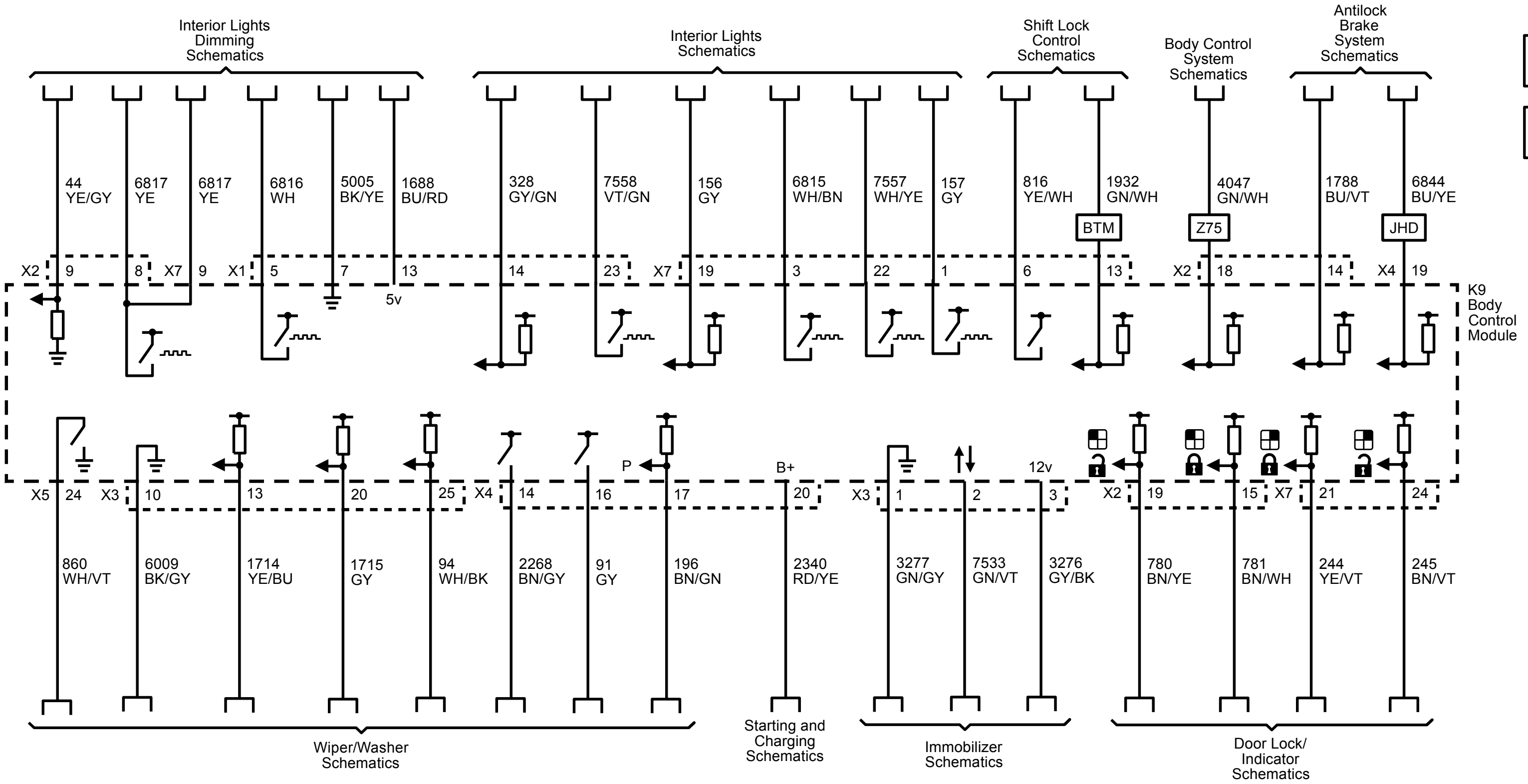
Subsystem References (1 of 4)


Power Moding Schematics
Immobilizer Schematics
Starting and Charging Schematics
Horn Schematics
Automatic Transmission Controls Schematics
Power Moding Schematics
Fog Lights Schematics
Theft Deterrent System Schematics
5199 GN/VT
109 BN/GN
5075 WH/YE
5076 BU/VT
5077 BK/VT
28 BN/WH
3287 GN/WH
5526 VT/YE
553 BU/GY
3 VT/BK
4 VT/YE
1020 WH/VT
1073 WH/BK
1317 BN/WH
317 YE/VT
187 BU/GY
192 BU/GY
728 GY
L83/L86
L83/L86
L83/L86
BTM
BTM
-BTM
-BTM
T3U
T79
T79
T3U
X4 15
24
18
21 X5 6
19 X3 18
21
14
6
5
15
22 X5 10
5 X1 12
15
21
5V
IGN
IGN
IGN
5V
+/-
K9 Body Control Module
X7 15
12
18 X6 4
1
2 X5 16
22 X4 22
12 X2 6
27
12V
25
16 X1 26 X6 17
8
-BTM
KB6
KB6
3265 YE/BN
3269 BN/WH
3268 GY/BK
294 BN/YE
195 BU/WH
3271 GY/GN
3267 VT/YE
45 BU
5985 VT/YE
755 GY/VT
5697 GY
3274 YE/GN
3272 GY/WH
3273 GY
3275 BU/WH
5906 GN/VT
5908 VT/WH
Door Lock/ Indicator Schematics
Exterior Lights Schematics
Power Moding Schematics
Interior Lights Dimming Schematics
Remote Function Schematics
Heated/ Cooled Seat Schematics

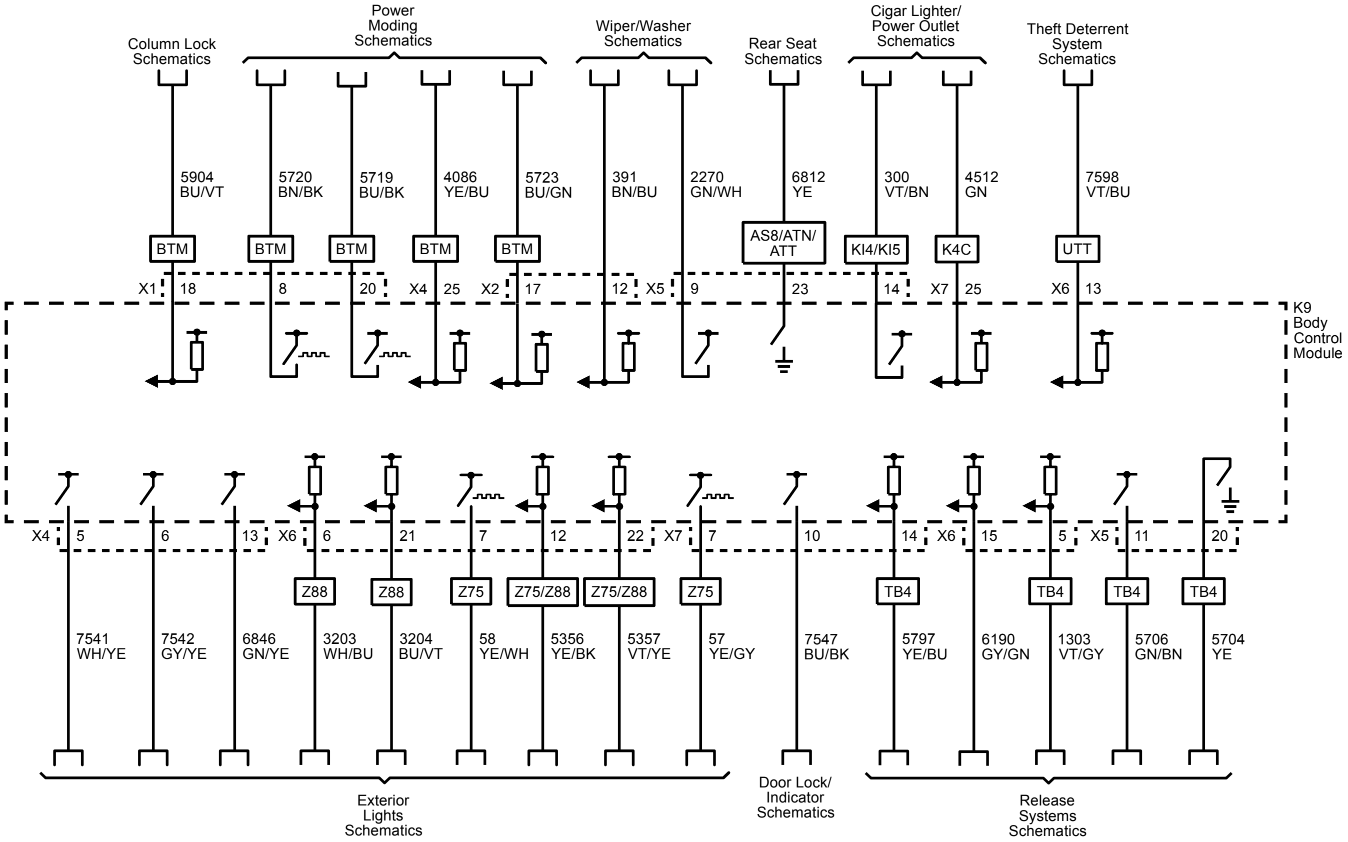

Headlights/ Daytime Running Lights (DRL) Schematics
307 YE/BN
524 WH
306 GN/BN
103 WH/VT
278 WH/BU
Trailer Connector/ Provision Schematics
3691 WH/BU
3691 WH/BU
Adjustable Pedal Schematics
6812 YE
JF4-A45
Transfer Case Control Schematics
300 VT/BN
NQH
Headlights/ Daytime Running Lights (DRL) Schematics
7539 BU/BN
1969 BN/VT
312 YE
712 YE
7538 GY/BU
Exterior Lights Schematics
5065 VT/WH
19 BN/GN
18 YE/BU
X3 17
11
X1 11
16
X2 10
20
X7 16
X5 23
14
7
18
X4 2
1
7
11
4
X5 1
K9 Body Control Module
X5 12
X3 16
9
4
12
24
X2 7
5V
13
26
X5 2
26
X1 22
19
X7 8
X4 3
19
X1 10
X5 8
17
BRS/DL3/ DR4/Z75
BRS
6311 WH/BU
5737 GY/GN
1884 BN/GN
1444 WH/RD
663 WH/GN
664 VT/BU
526 WH/GN
598 GY/RD
111 GN/WH
1314 BU/WH
38 BU/BN
13 GN/GY
552 BKGN
5996 GY/GN
1315 GN/VT
6844 BU/YE
1134 BU/VT
5186 BU/WH
5187 YE/GY
Cruise Control Schematics
Exterior Lights Schematics
Step/Running Board Schematics
Hydraulic Brake Schematics
Trailer Connector/ Provision Schematics

Subsystem References (3 of 4)

LOC
DESC


Interior Lights Dimming Schematics
Interior Lights Schematics
Shift Lock Control Schematics
Body Control System Schematics
Antilock Brake System Schematics
44 YE/GY
6817 YE
6817 YE
6816 WH
5005 BK/YE
1688 BU/RD
328 GY/GN
7558 VT/GN
156 GY
6815 WH/BN
7557 WH/YE
157 GY
816 YE/WH
1932 GN/WH
BTM
4047 GN/WH
Z75
1788 BU/VT
6844 BU/YE
JHD
X2
9
8
X7
9
X1
5
7
13
5v
14
23
X7
19
3
22
1
6
13
X2
18
14
X4
19
K9 Body Control Module
P
B+
12v
X5
24
X3
10
13
20
25
X4
14
16
17
20
X3
1
2
3
X2
19
15
X7
21
24
860 WH/VT
6009 BK/GY
1714 YE/BU
1715 GY
94 WH/BK
2268 BN/GY
91 GY
196 BN/GN
2340 RD/YE
3277 GN/GY
7533 GN/VT
3276 GY/BK
780 BN/YE
781 BN/WH
244 YE/VT
245 BN/VT
Wiper/Washer Schematics
Starting and Charging Schematics
Immobilizer Schematics
Door Lock/ Indicator Schematics

Subsystem References (4 of 4)



Column Lock Schematics
Power Moding Schematics
Wiper/Washer Schematics
Rear Seat Schematics
Cigar Lighter/ Power Outlet Schematics
Theft Deterrent System Schematics
5904 BU/VT
5720 BN/BK
5719 BU/BK
4086 YE/BU
5723 BU/GN
391 BN/BU
2270 GN/WH
6812 YE
300 VT/BN
4512 GN
7598 VT/BU
BTM
BTM
BTM
BTM
BTM
AS8/ATN/ ATT
KI4/KI5
K4C
UTT
X1
18
8
20
X4
25
X2
17
12
X5
9
23
14
X7
25
X6
13
K9 Body Control Module
X4
5
6
13
X6
6
21
7
12
22
X7
7
10
14
X6
15
5
X5
11
20
Z88
Z88
Z75
Z75/Z88
Z75/Z88
Z75
TB4
TB4
TB4
TB4
7541 WH/YE
7542 GY/YE
6846 GN/YE
3203 WH/BU
3204 BU/VT
58 YE/WH
5356 YE/BK
5357 VT/YE
57 YE/GY
7547 BU/BK
5797 YE/BU
6190 GY/GN
1303 VT/GY
5706 GN/BN
5704 YE
Exterior Lights Schematics
Door Lock/ Indicator Schematics
Release Systems Schematics

Description and Operation

Body Control System Description and Operation

The body control system consists of the body control module (BCM), communications, and various input and outputs. Some inputs, outputs and messages require other modules to interact with the BCM. The BCM also has discrete input and output terminals to control the vehicle's body functions. The BCM is wired to the high speed GMLAN serial data bus, low speed GMLAN serial data bus and Multiple LIN buses and acts as a gateway between them.

Power Mode Master

This vehicle body control module (BCM) functions as the power mode master (PMM). The ignition switch is a low current switch with multiple discrete ignition switch signals to the PMM for determining the power mode that will be sent over the serial data circuits to the other modules that need this information; the PMM will activate relays and other direct outputs of the PMM as needed. Refer to Power Mode Description and Operation (Without BTM)Power Mode Description and Operation (With BTM) for a complete description of power mode functions.

Gateway

The body control module (BCM) in this vehicle functions as a gateway or translator. The purpose of the gateway is to translate serial data messages between the GMLAN high speed bus and the GMLAN low speed bus for communication between the various modules. The gateway will interact with each network according to that network's transmission protocol.

All communication between the BCM and a scan tool is on the high speed GMLAN serial data circuits. A lost communication DTC typically is set in modules other than the module with a communication failure.

Body Control

The various body control module (BCM) input and output circuits are illustrated in the corresponding functional areas on the BCM electrical schematics. Refer to the Body Control System Schematics for more detailed information.

Data Link Communications Description and Operation

Note: This is an overview of different serial data buses used by GM devices to communicate with each others. Use Data Communication Schematics to find out which serial data buses are configured for a specific vehicle.

Circuit Description

There are many components in a vehicle that rely on information from other sources, transmit information to other sources, or both. Serial data communication networks provide a reliable, cost effective, way for various components of the vehicle to “talk” to one another and share information.

GM uses a number of different communication buses to insure the timely and efficient exchange of information between devices. When compared to each other, some of these buses are different in nature as far as speed, signal characteristics, and behavior. An example of this is the High Speed GMLAN and Low Speed GMLAN buses.

On the other hand, when other buses are compared to each other they have similar characteristics and simply operate in parallel. In this case they are used to group together components which have high interaction. Examples are the High Speed GMLAN, Powertrain Expansion, and Chassis Expansion buses. This allows them to communicate with each other on a bus with reduced message congestion insuring faster and the more timely exchange of information than if all vehicle devices were on a single bus.

The majority of information that exists within a given network generally stays local; however some information will have to be shared on other networks. Control modules designated as Gateway’s perform the function of transferring information between the various buses. A Gateway module is connected to at least 2 buses and will interact with each network according to its message strategy and transmission models.

GMLAN provides the capability for a receiving device to monitor message transmissions from other devices in order to determine if messages of interest are not being received. The primary purpose is to allow reasonable default values to be substituted for the information no longer being received. Additionally, a device may set a Diagnostic Trouble Code to indicate that the device it is expecting information from is no longer communicating.

High Speed GMLAN Circuit Description

A High Speed GMLAN Bus is used where data needs to be exchanged at a high enough rate to minimize the delay between the occurrence of a change in sensor value and the reception of this information by a control device using the information to adjust vehicle system performance.

The High Speed GMLAN serial data network consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

Data symbols (1’s and 0’s) are transmitted sequentially at a rate of 500 Kbit/s. The data to be transmitted over the bus is represented by the voltage difference between the GMLAN-High signal voltage and the GMLAN-Low signal voltage.

When the two wire bus is at rest the GMLAN-High and GMLAN-Low signal circuits are not being driven and this represents a logic “1”. In this state both signal circuits are at the same voltage of 2.5 V. The differential voltage is approximately 0 V.

When a logic “0” is to be transmitted, the GMLAN-High signal circuit is driven higher to about 3.5 V and the GMLAN-Low circuit is driven lower to about 1.5 V. The differential voltage becomes approximately 2.0 (+/- 0.5) V.

Chassis High Speed GMLAN Circuit Description

The GMLAN Chassis Expansion Bus is basically a copy of the High Speed GMLAN Bus except that its use is reserved for chassis components. This implementation splits message congestion between two parallel buses helping to insure timely message transmission and reception. Sometimes communication is required between the Chassis Expansion Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K17 Electronic Brake Control Module (EBCM) as the Gateway module. Since the High Speed GMLAN Chassis Expansion Bus and primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Powertrain High Speed GMLAN Circuit Description

The GMLAN Powertrain Expansion Bus is basically a copy of the High Speed GMLAN Bus except that its use is reserved for Powertrain components. The bus is optional based upon feature content. Sometimes communication is required between the Powertrain Expansion Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K20 Engine Control Module (ECM) as the Gateway module. Since the High Speed GMLAN Powertrain Expansion Bus and the primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Object High Speed GMLAN Circuit Description

The GMLAN Object Bus is basically a copy of the High Speed GMLAN Bus except that its use is reserved for the enhanced safety system. This implementation is used to isolate the heavy communication among the enhanced safety system devices from the other vehicle buses, reducing congestion. The K124 Active Safety Control Module is connected to the Object Bus as well as the Primary High Speed GMLAN Bus, the Chassis Expansion Bus, and the Low Speed GMLAN Bus. The K124 Active Safety Control Module acts as a Gateway module for all required communication between the Object Bus devices and devices on these other vehicle buses. The GMLAN Object Bus operates in the same manner as the Chassis Expansion and Primary High Speed buses and so the diagnostics are similar. The Object Bus is physically partitioned into a Front Object Bus and a Rear Object Bus with each partition having its own communication enable circuit to activate the partition, but functional operation of both is identical. The Front Object Bus standard devices are the K124 Active Safety Control Module, the K109 Frontview Camera Module, and the B233B Radar Sensor Module – Long Range. The Front Object Bus optional devices are the B233LF Radar Sensor Module – Short Range Left Front and the B233RF Radar Sensor Module – Short Range Right Front. The Rear Object Bus is optional and when present will have the K124 Active Safety Control Module, B233LR Radar Sensor Module – Short Range Left Rear, and B233RR Radar Sensor Module – Short Range Right Rear on the bus. All Object Bus components are powered by the K124 Active Safety Control Module via the communication enable circuits, except the K109 Frontview Camera Module which is powered directly by battery.

Media Oriented Systems Transport (MOST) Circuit Description

The MOST Infotainment network is a dedicated high speed multimedia streaming data bus independent from GMLAN. The MOST bus will be configured in a physical hardwired loop with each device within the bus sends and receives data on an assigned MOST addresses in a set order. Each device on the MOST bus will be required to have twisted pair copper wires (2 transmit TX, 2 receive RX, and 1 electronic control line which is a 12 V wakeup signal line). The A11 Radio is the MOST Master and will monitor the bus for vehicle configuration, Infotainment data messages and errors on the bus. The MOST initialization consists of a short 100 ms low voltage pulse on the electronic control line (or MOST control line) connected to all devices contained on the MOST ring. This wakeup message once received by each device, will first respond with a generic device response. Once these initial responses on the MOST bus are reported successfully without error to the A11 Radio, the second data request will record the MOST device addresses, their functionality requirements and capabilities within. The A11 Radio will learn this information and also record the address node sequence on the MOST bus at this point. This node address list will now be stored within the A11 Radio as the MOST bus configuration (called “Last Working MOST ID of Node 1 – 9” on scan tool data display).

When MOST receive, transmit, or control line faults are detected, transmit/receive messages will not received as expected from the wakeup request. The A11 Radio and the K74 Human Machine Interface Control Module will then perform diagnostics to isolate these MOST faults. If the MOST control line is shorted low to 0 V for excess amount of time, the A11 Radio will set a U2098 DTC and K74 Human Machine Interface Control Module will set a U0029 02 DTC. At this point the MOST bus will be unable to communicate until the shorted MOST control line is repaired.

Once the shorted MOST control line diagnostics pass, the A11 Radio will attempt to resend the initial short pulse attempts up to 3 times on the MOST control line. If the expected responses are not received, the A11 Radio continues into a failure mode setting a U0028 DTC and will continue on to send one 300 ms long pulse, which will enable the furthest upstream transmitting device to become the surrogate MOST Master in this MOST fault/diagnostic mode. When the A11 Radio receives this new MOST Master identity, the surrogate MOST master device can be identified based on scan tool data parameter “Surrogate MOST Master Node Upstream Position”. The scan tool should be used to determine the MOST bus configuration and direction by utilizing the “Last Working MOST ID of Node 1 – 9” parameters from the A11 Radio data display. When a fault is present, it will indicate the newly enabled “Surrogate MOST Master Node Upstream Position” from the A11 Radio. This will assist in determining where the MOST bus/control is at fault. The MOST device upstream from the surrogate MOST master device, transmit, receive, or control lines will be the suspect areas for diagnostics at this point. These faults can be associated with any of the MOST transmit, receive, or control line twisted copper wires or possibly an internal device fault.

The K74 Human Machine Interface Control Module will set a U0029 00 DTC when it diagnoses a MOST bus not communicating properly after one attempt. When the DTC U0029 00 is set by the K74 Human Machine Interface Control Module without the corresponding DTC U0028 from the A11 Radio, it will be an indication of an intermittent wiring/device condition.

Low Speed GMLAN Circuit Description

Low Speed GMLAN Bus is used in applications where a high data rate is not required which allows for the use of less complex components. It is typically used for operator controlled functions where the response time requirements are slower than those required for dynamic vehicle control.

The Low Speed GMLAN Serial Data Network consists of a single wire, ground referenced bus with high side voltage drive. During on road vehicle operation data symbols (1’s and 0’s) are transmitted sequentially at the normal rate of 33.3 Kbit/s. For component programming only, a special high speed data mode of 83.3 Kbit/s may be used.

Unlike the high speed dual wire networks, the single wire low speed network does not use terminating resistors at either end of the network.

The data symbols to be transmitted over the bus are represented by different voltage signals on the bus. When the Low Speed GMLAN Bus is at rest and is not being driven, there is a low signal voltage of approximately 0.2 V. This represents a logic “1”. When a logic “0” is to be transmitted, the signal voltage is driven higher to around 4.0 V or higher.

Local Interconnect Network (LIN) Circuit Description

The Local Interconnect Network (LIN) Bus consists of a single wire with a transmission rate of 10.417 Kbit/s. This bus is used to exchange information between a master control module and other smart devices which provide supporting functionality. This type of configuration does not require the capacity or speed of either a High Speed GMLAN Bus or Low Speed GMLAN Bus and is thus relatively simpler.

The data symbols (1’s and 0’s) to be transmitted are represented by different voltage levels on the communication bus. When the LIN Bus is at rest and is not being driven, the signal is in a high voltage state of approximately Vbatt. This represents a logic “1”. When a logic “0” is to be transmitted, the signal voltage is driven low to about ground (0.0 V).

Communication Enable Circuit Description

Devices on High Speed GMLAN Bus enable or disable communication based on the voltage level of the communication enable circuit. When the circuit voltage is high (around 12 V), communications are enabled. When the circuit is low, communications are disabled.

Data Link Connector (DLC)

The X84 Data Link Connector (DLC) is a standardized 16-cavity connector. Connector design and location is dictated by an industry wide standard, and is required to provide the following:

- Terminal 1: Low speed GMLAN communications terminal
- Terminal 3: Object high speed GMLAN serial bus (+) terminal
- Terminal 4: Scan tool power ground terminal
- Terminal 5: Common signal ground terminal
- Terminal 6: High speed GMLAN serial data bus (+) terminal
- Terminal 11: Object high speed GMLAN serial bus (-) terminal
- Terminal 12: Chassis high speed GMLAN serial bus (+) terminal
- Terminal 13: Chassis high speed GMLAN serial bus (-) terminal
- Terminal 14: High speed GMLAN serial data bus (-) terminal
- Terminal 16: Scan tool power, battery positive voltage terminal

Serial Data Reference

The scan tool communicates over the various buses on the vehicle. When a scan tool is installed on a vehicle, the scan tool will try to communicate with every device that could be optioned into the vehicle. If an option is not installed on the vehicle, the scan tool will display No Comm (or Not Connected) for that optional device. In order to avert misdiagnoses of No Communication with a specific device, refer to CELL Link Error - Link target cell (cell ID 148085) is invalid for this publication. for a list of devices and the buses they communicate with. Use schematics and specific vehicle build RPO codes to determine optional devices.

Serial Data Gateway Module Description and Operation

The K56 Serial Data Gateway Module is used to handle communications between multiple GMLAN busses and functions as a gateway to isolate the secure networks from the unsecured networks. It was created to mitigate bus loading to support cyber security and new active/advanced safety features like Limited Ability Autonomous Driving and Enhanced Collision Avoidance (if equipped). The K56 Serial Data Gateway Module is used as a frame-to-frame gateway for all functional messages.

Depending on the vehicle contents, the K56 Serial Data Gateway Module is gating between primary High Speed GMLAN Bus, Gateway Expansion High Speed GMLAN Bus, Gateway Isolated High Speed GMLAN Bus, and Chassis High Speed GMLAN Bus. The K56 Serial Data Gateway Module is also gating between primary Low Speed GMLAN Bus and Gateway Isolated Low Speed GMLAN Bus.

Communication between the K56 Serial Data Gateway Module and a scan tool is done through the primary High Speed GMLAN Bus.

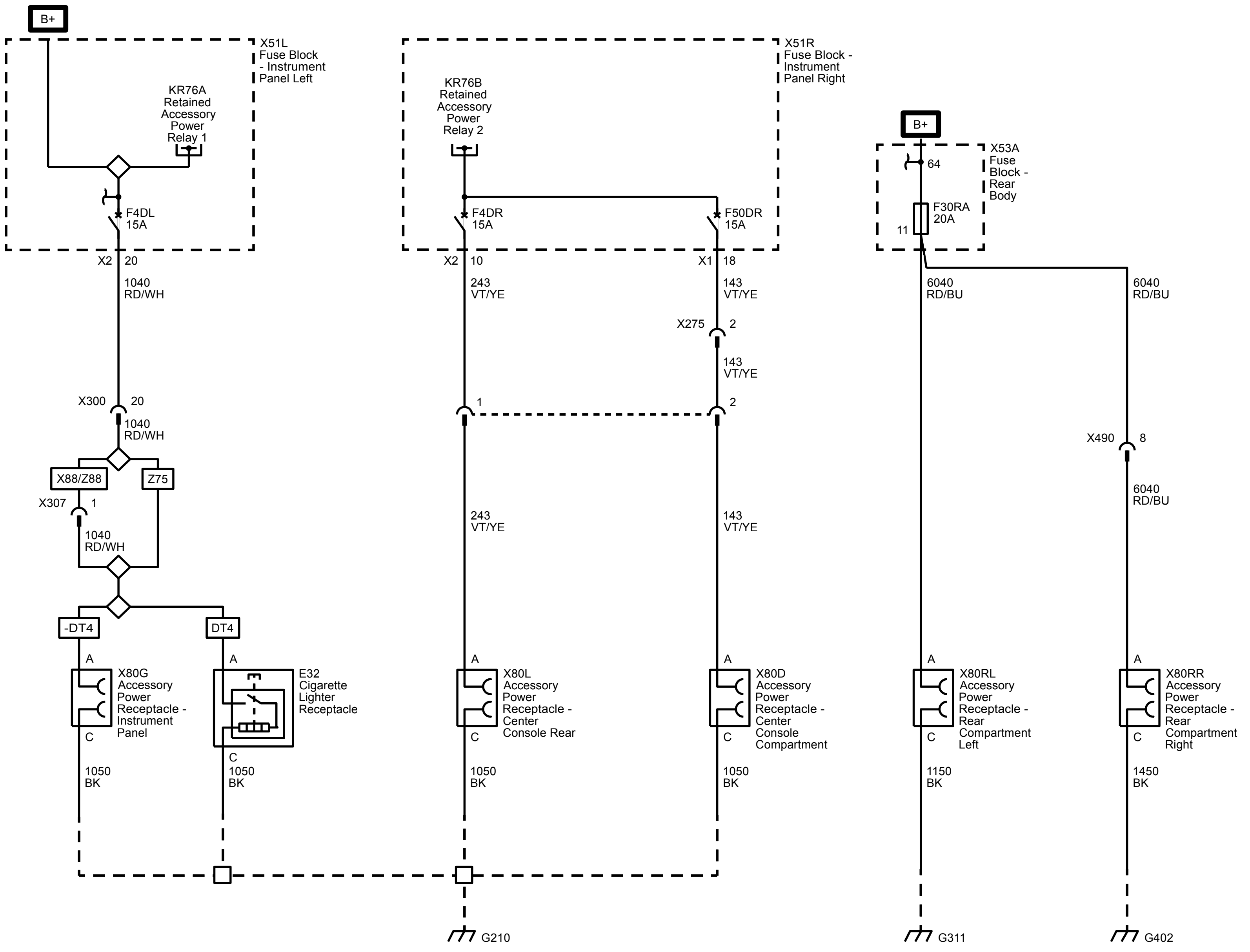
Power and Signal Distribution

Power Outlets

Schematic and Routing Diagrams

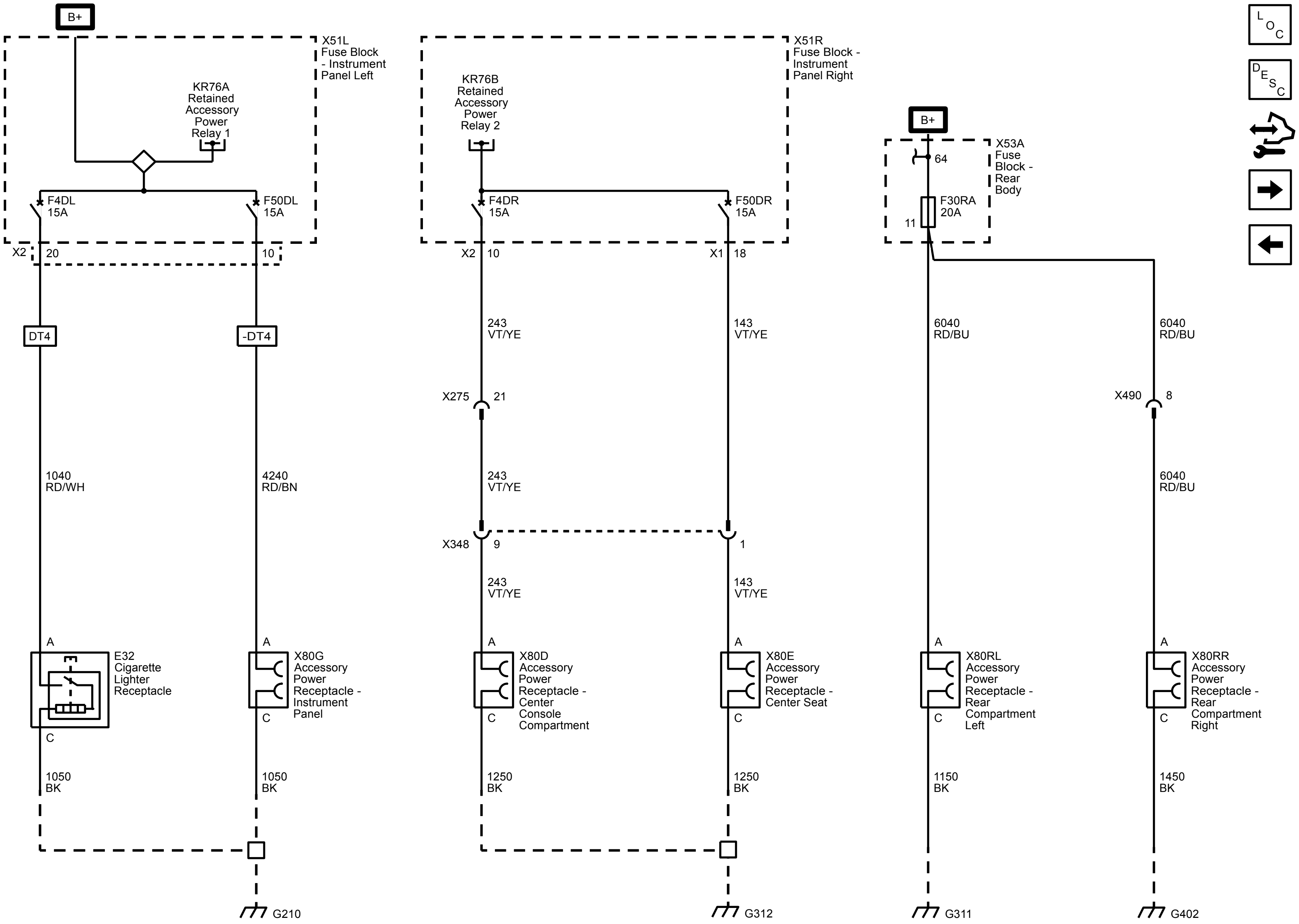
Cigar Lighter/Power Outlet Schematics

12-Volt DC Power Outlets (D07/DCK)

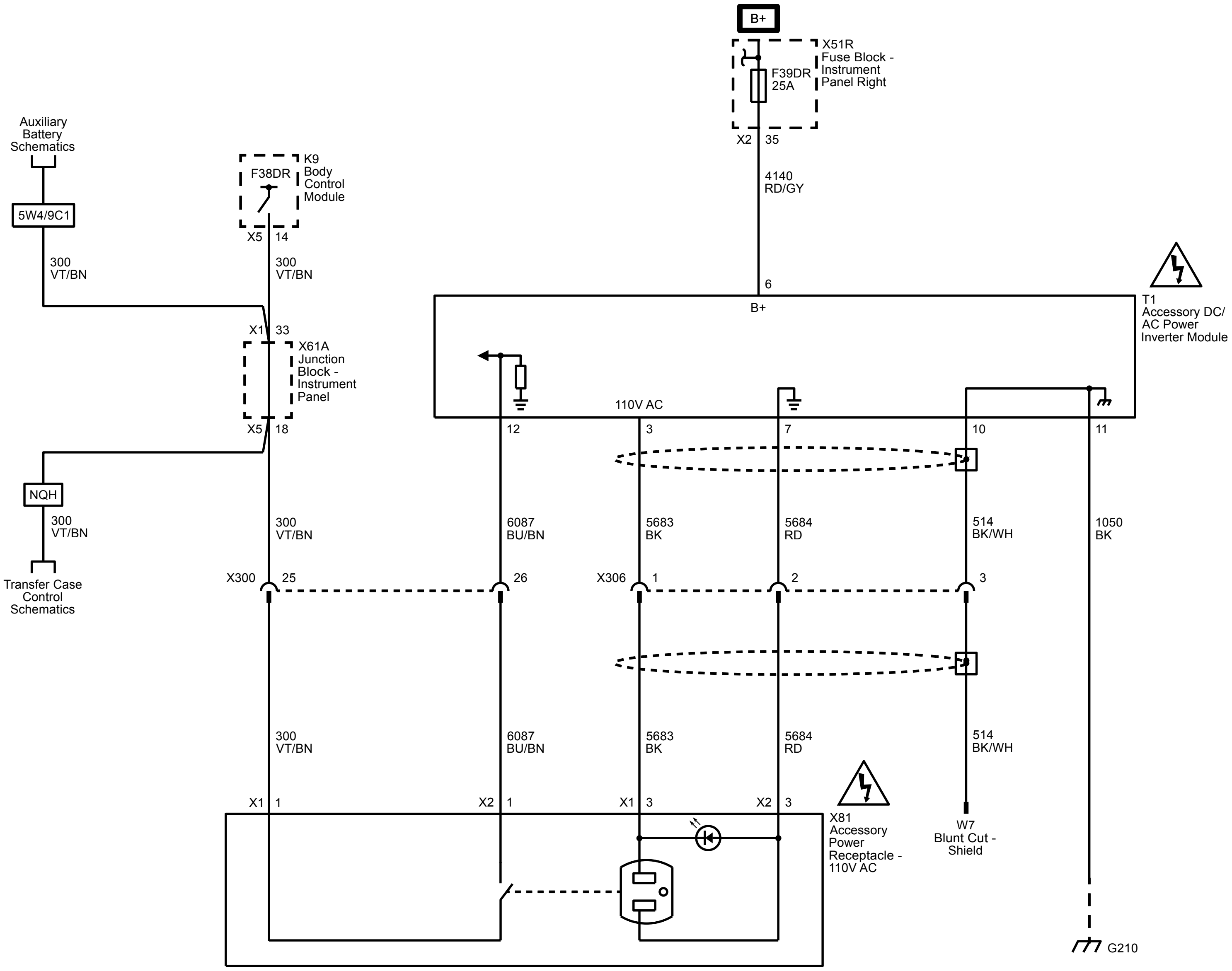


B+
X51L
Fuse Block - Instrument Panel Left
KR76A
Retained Accessory Power Relay 1
F4DL
15A
X2
20
1040
RD/WH
X300
20
1040
RD/WH
X88/Z88
Z75
X307
1
1040
RD/WH
-DT4
DT4
A
X80G
Accessory Power Receptacle - Instrument Panel
C
1050
BK
A
E32
Cigarette Lighter Receptacle
C
1050
BK
KR76B
Retained Accessory Power Relay 2
X51R
Fuse Block - Instrument Panel Right
F4DR
15A
F50DR
15A
X2
10
X1
18
243
VT/YE
143
VT/YE
X275
2
143
VT/YE
1
2
243
VT/YE
143
VT/YE
A
X80L
Accessory Power Receptacle - Center Console Rear
C
1050
BK
A
X80D
Accessory Power Receptacle - Center Console Compartment
C
1050
BK
G210
B+
X53A
Fuse Block - Rear Body
64
F30RA
20A
11
6040
RD/BU
6040
RD/BU
X490
8
6040
RD/BU
A
X80RL
Accessory Power Receptacle - Rear Compartment Left
C
1150
BK
A
X80RR
Accessory Power Receptacle - Rear Compartment Right
C
1450
BK
G311
G402

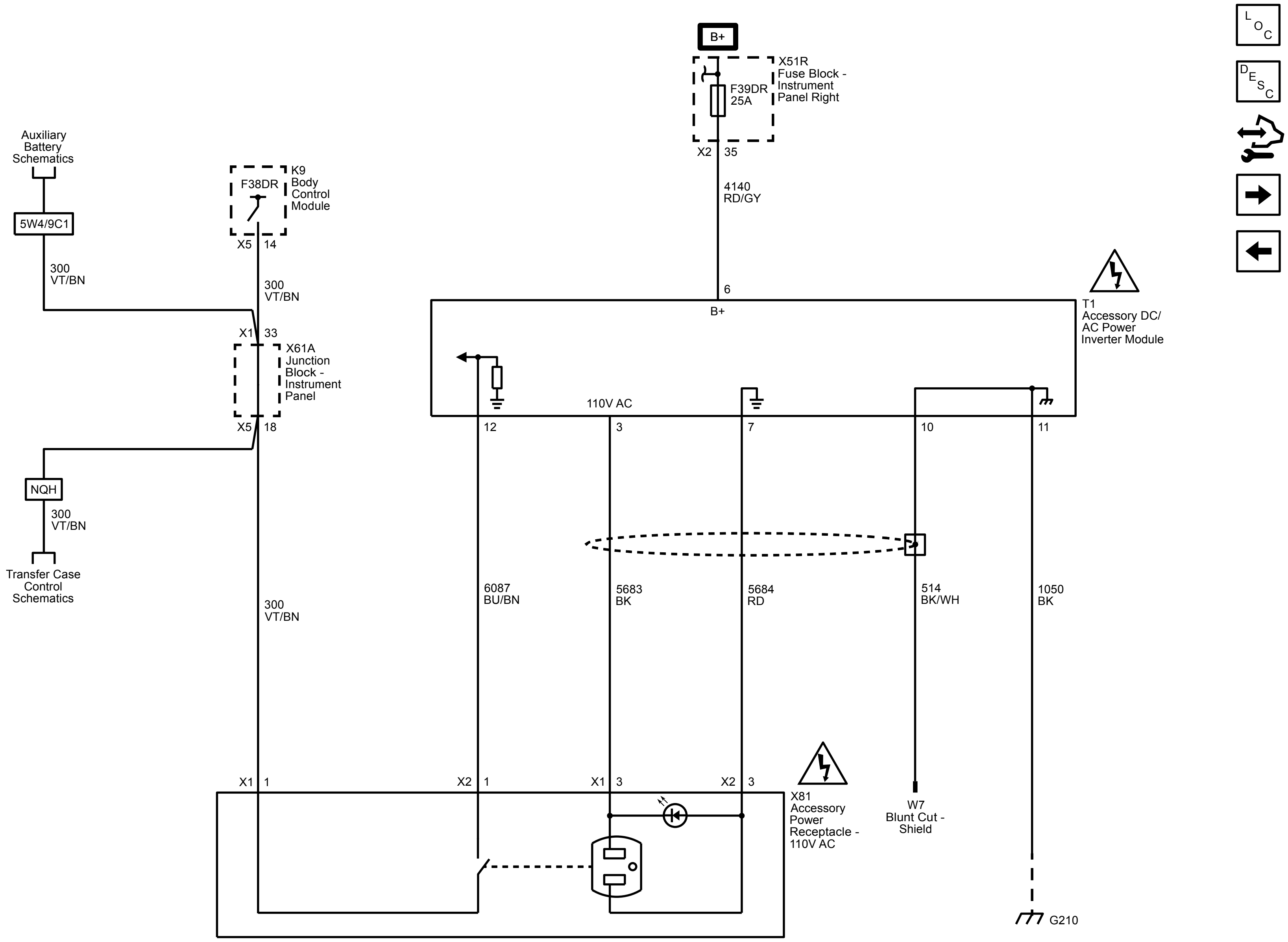
12-Volt DC Power Outlets (AZ3)

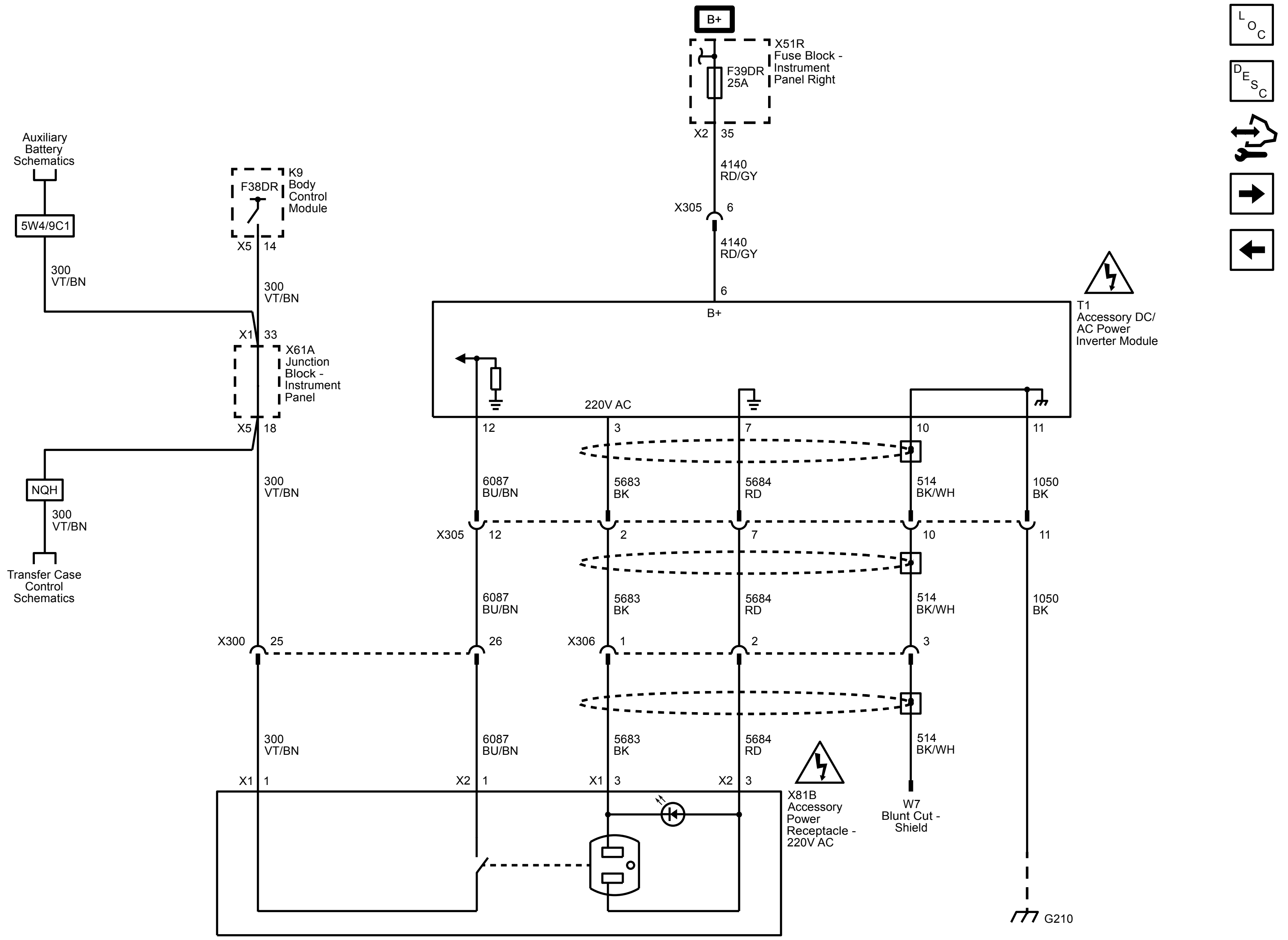

B+
X51L
Fuse Block
- Instrument
Panel Left
KR76A
Retained
Accessory
Power
Relay 1
F4DL
15A
F50DL
15A
X2
20
10
DT4
-DT4
1040
RD/WH
4240
RD/BN
A
E32
Cigarette
Lighter
Receptacle
C
A
X80G
Accessory
Power
Receptacle -
Instrument
Panel
C
1050
BK
1050
BK
G210
X51R
Fuse Block -
Instrument
Panel Right
KR76B
Retained
Accessory
Power
Relay 2
F4DR
15A
F50DR
15A
X2
10
X1
18
243
VT/YE
143
VT/YE
X275
21
243
VT/YE
X348
9
1
243
VT/YE
143
VT/YE
A
X80D
Accessory
Power
Receptacle -
Center
Console
Compartment
C
A
X80E
Accessory
Power
Receptacle -
Center Seat
C
1250
BK
1250
BK
G312
B+
X53A
Fuse
Block -
Rear
Body
64
F30RA
20A
11
6040
RD/BU
6040
RD/BU
X490
8
6040
RD/BU
A
X80RL
Accessory
Power
Receptacle -
Rear
Compartment
Left
C
A
X80RR
Accessory
Power
Receptacle -
Rear
Compartment
Right
C
1150
BK
1450
BK
G311
G402
LOC
DESC

110-Volt AC Power Outlet (KI4 with D07/DCK)

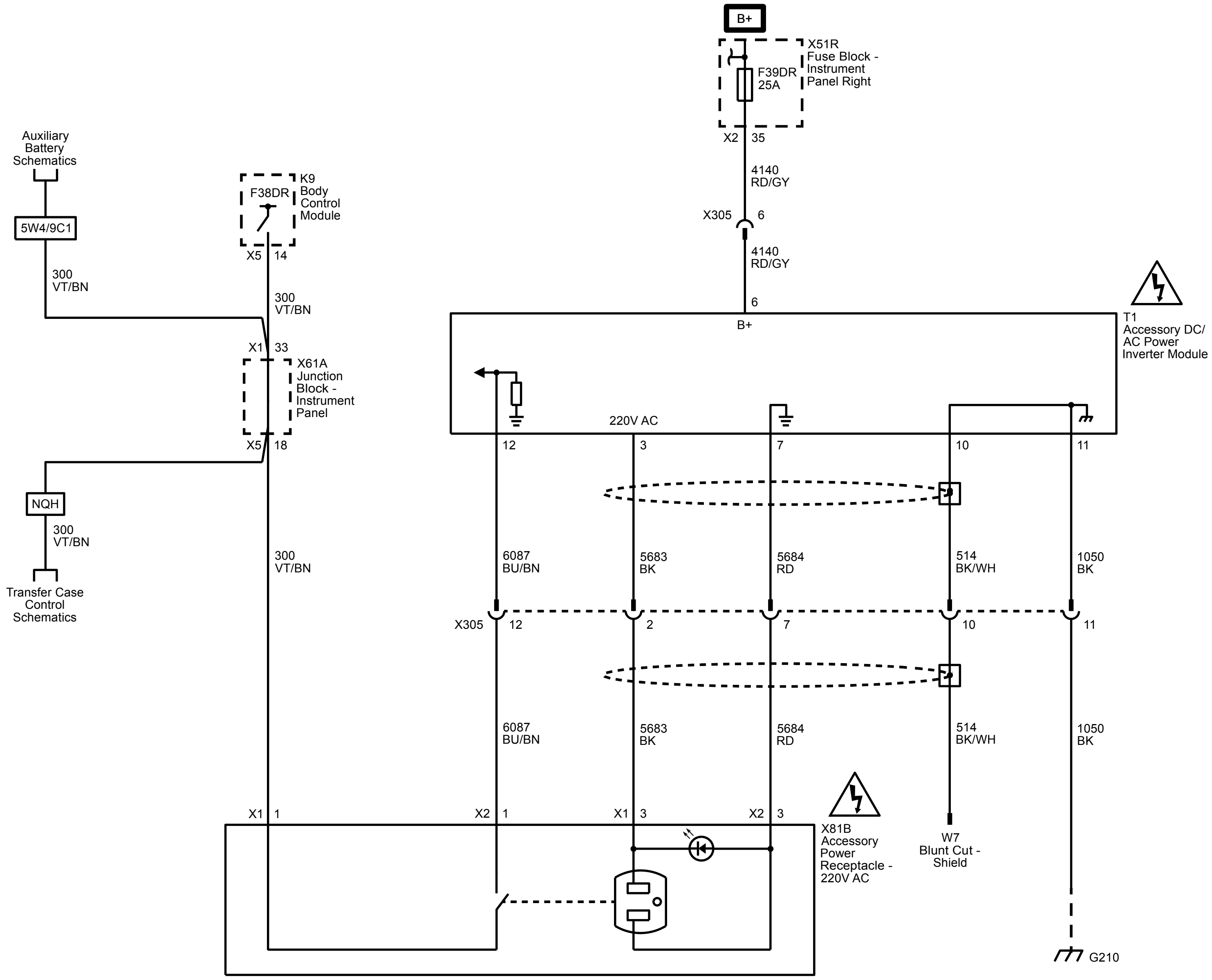

B+
X51R
Fuse Block - Instrument Panel Right
F39DR
25A
X2
35
4140
RD/GY
Auxiliary Battery Schematics
5W4/9C1
300
VT/BN
F38DR
K9
Body Control Module
X5
14
300
VT/BN
X1
33
X61A
Junction Block - Instrument Panel
X5
18
NQH
300
VT/BN
Transfer Case Control Schematics
6
B+
T1
Accessory DC/AC Power Inverter Module
110V AC
12
3
7
10
11
6087
BU/BN
5683
BK
5684
RD
514
BK/WH
1050
BK
X300
25
26
X306
1
2
3
300
VT/BN
6087
BU/BN
5683
BK
5684
RD
514
BK/WH
X1
1
X2
1
X1
3
X2
3
X81
Accessory Power Receptacle - 110V AC
W7
Blunt Cut - Shield
G210

110-Volt AC Power Outlet (KI4 with AZ3)

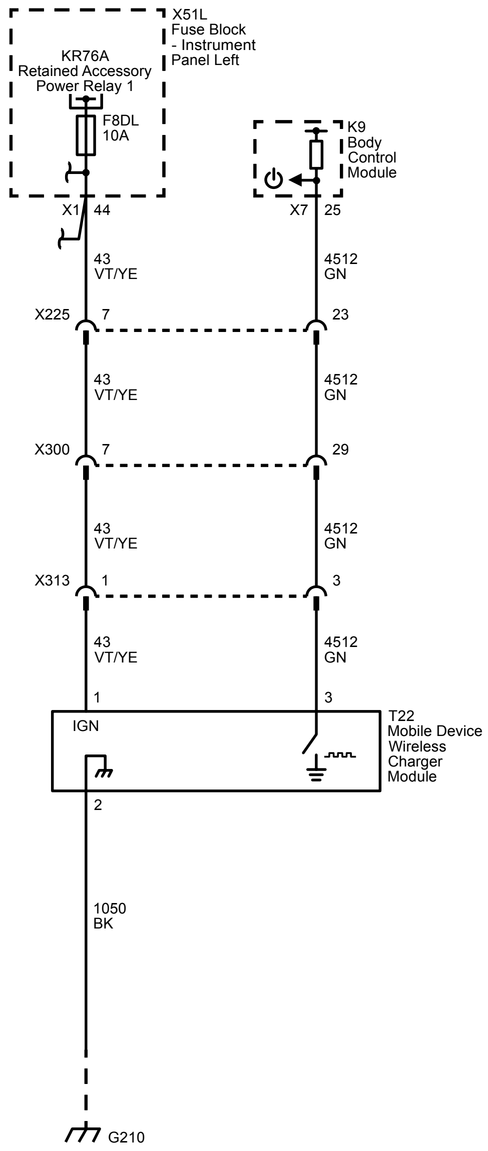

B+
X51R
Fuse Block -
Instrument
Panel Right
F39DR
25A
X2 35
4140
RD/GY
Auxiliary
Battery
Schematics
5W4/9C1
300
VT/BN
F38DR
K9
Body
Control
Module
X5 14
300
VT/BN
X1 33
X61A
Junction
Block -
Instrument
Panel
X5 18
NQH
300
VT/BN
Transfer Case
Control
Schematics
300
VT/BN
6
B+
T1
Accessory DC/
AC Power
Inverter Module
110V AC
12
3
7
10
11
6087
BU/BN
5683
BK
5684
RD
514
BK/WH
1050
BK
X1 1
X2 1
X1 3
X2 3
X81
Accessory
Power
Receptacle -
110V AC
W7
Blunt Cut -
Shield
G210
LOC
DESC


B+
X51R Fuse Block - Instrument Panel Right
F39DR 25A
X2 35
4140 RD/GY
X305 6
4140 RD/GY
6
B+
T1 Accessory DC/ AC Power Inverter Module
220V AC
12
3
7
10
11
Auxiliary Battery Schematics
5W4/9C1
300 VT/BN
K9 Body Control Module
F38DR
X5 14
300 VT/BN
X1 33
X61A Junction Block - Instrument Panel
X5 18
NQH
300 VT/BN
Transfer Case Control Schematics
6087 BU/BN
5683 BK
5684 RD
514 BK/WH
1050 BK
X305 12
2
7
10
11
6087 BU/BN
5683 BK
5684 RD
514 BK/WH
1050 BK
X300 25
26
X306 1
2
3
300 VT/BN
6087 BU/BN
5683 BK
5684 RD
514 BK/WH
X1 1
X2 1
X1 3
X2 3
X81B Accessory Power Receptacle - 220V AC
W7 Blunt Cut - Shield
G210

220-Volt Power Outlet (KI5 with AZ3)


B+
X51R
Fuse Block - Instrument Panel Right
F39DR
25A
X2
35
4140
RD/GY
X305
6
4140
RD/GY
6
B+
T1
Accessory DC/ AC Power Inverter Module
220V AC
12
3
7
10
11
Auxiliary Battery Schematics
5W4/9C1
300
VT/BN
F38DR
K9
Body Control Module
X5
14
300
VT/BN
X1
33
X61A
Junction Block - Instrument Panel
X5
18
NQH
300
VT/BN
Transfer Case Control Schematics
300
VT/BN
6087
BU/BN
5683
BK
5684
RD
514
BK/WH
1050
BK
X305
12
2
7
10
11
6087
BU/BN
5683
BK
5684
RD
514
BK/WH
1050
BK
X1
1
X2
1
X1
3
X2
3
X81B
Accessory Power Receptacle - 220V AC
W7
Blunt Cut - Shield
G210

LOC
DESC

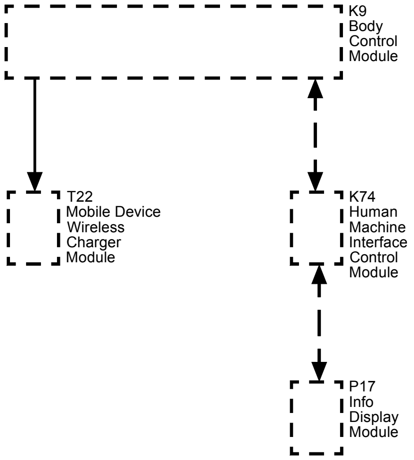

X51L
Fuse Block
- Instrument
Panel Left
KR76A
Retained Accessory
Power Relay 1
F8DL
10A
X1
44
43
VT/YE
K9
Body
Control
Module
X7
25
4512
GN
X225
7
23
43
VT/YE
4512
GN
X300
7
29
43
VT/YE
4512
GN
X313
1
3
43
VT/YE
4512
GN
1
3
IGN
T22
Mobile Device
Wireless
Charger
Module
2
1050
BK
G210

Description and Operation

Mobile Device Wireless Charger Description and Operation

Mobile Device Wireless Charging System

Mobile Device Wireless Charging System Block Diagram



The Mobile Device Wireless Charging System (WCS) is an system for wirelessly charging mobile devices. It is capable of charging the batteries of compatible mobile devices. A compatible device is one that is compliant with Power Matters Alliance (PMA) or Wireless Power Consortium (WPC) Standard, meaning that it is equipped with a PMA or WPC wireless charge “receiver” that will work with the charge “transmitter” installed in the vehicle. The devices may utilize built-in charging circuitry or an adapter (external plug-in device which contains the charging circuitry). To check for phone or other device compatibility, refer to GM Total Connect.

Warning: Remove all objects from the charging pad before charging your mobile device. Objects, such as coins, keys, rings, paper clips, or cards, between the phone and charging pad will become very hot. On the rare occasion that the charging system does not detect an object, and the object gets wedged between the phone and charger, remove the phone and allow the object to cool before removing it from the charging pad, to prevent burns.

Charging

To charge a device, place it on the charging surface in the vehicle. There is a charging coil located in the center of the charging surface. The device has a charging coil typically near the center of the device. These coils must be lined up in order for charging to proceed. When the interruptible retained accessory power (IRAP) relay is closed (this is true typically when vehicle ignition is in Run or Accessory position), the WCS will detect the device, establish communications with the device to confirm it is a compatible device, and then deliver charging power to the device via wireless interface. The WCS will be able to deliver up to 5W of power to compatible devices. It shall only enter a charging state if communication is established and a compatible device is identified.

The WCS shall not enter a charging state if there is no communication established with a compatible device. If a non-compatible device or metallic foreign object is detected, the WCS will not transfer power. The charger monitors its internal temperature and will shut down if the charger temperature exceeds 185F (85C).

Indicator

The body control module will detect the device battery is charging and send a serial data message on the GMLAN bus to the radio display. The radio display will indicate a device is currently charging. When the indicator is toggling on and off this indicates a thermal limit has been reached and the device will not charge. For more information refer to the infotainment owners manual.

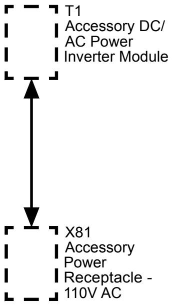
Power Outlets Description and Operation

12 Volt Power Outlet Receptacle Description and Operation

The vehicle is fitted with a 12 V accessory power receptacle. The accessory power receptacles are controlled by an ignition operated relay. The accessory power receptacles are operational when the ignition is turned to either the On or the Accessories positions. The X80G and E32 accessory power receptacles may be configured to be operational when the ignition is Off by changing the position of the 50A fuse from the F5DL position to the F6DL position in the left instrument panel fuse block.

110 Volt Power Outlet Receptacle System Description

Power Outlets Block Diagram



The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 110 V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 110 V at 60 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 150 watts of power. The accessory power receptacle – 110 V AC provides the usual connection for AC powered devices.

110 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 110 V AC has an internal switch, that detects when an AC powered device is plugged into the outlet. When the ignition is ON, and an AC powered device is plugged into the accessory power receptacle – 110 V AC, the normally open switch in the accessory power receptacle – 110 V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 110 V AC switch, the inverter module begins to supply 110 V AC to the accessory power receptacle – 110 V AC after a 1.5 s delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

110 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 110 V circuit for a short to vehicle chassis ground. If a 110 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

110 Volt Power Outlet Receptacle Overload Shutdown

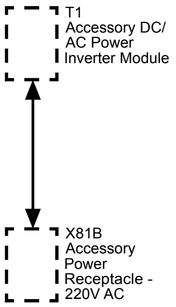
The accessory DC/AC power inverter module will turn OFF if the current in the 110 V circuit is greater than 3.8 A for 1 s , or 2.5 A for 10 s . The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

110 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the outlet, and then plugged into the outlet.

230 Volt Power Outlet Receptacle System Description

Power Outlets Block Diagram



The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 220V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 220–230 V at 50 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 150 watts of power. The accessory power receptacle – 220V AC provides the usual connection for AC powered devices.

230 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 220V AC has an internal switch, that detects when an AC powered device is plugged into the outlet. When the ignition is ON, and an AC powered device is plugged into the accessory power receptacle – 220V AC, the normally open switch in the accessory power receptacle – 220V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 220V AC switch, the inverter module begins to supply 220–230 V AC to the accessory power receptacle – 220V AC after a 1.5 second delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

230 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 230 V circuit for a short to vehicle chassis ground. If a 230 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

230 Volt Power Outlet Receptacle Overload Shutdown

The accessory AC/DC power control module will turn OFF if the current in the 230 V circuit is greater than 3.8 A for 1 second, or 2.5 A for 10 seconds. The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 second delay.

230 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the accessory power receptacle – 220V AC, and then plugged into the accessory power receptacle – 220V AC.

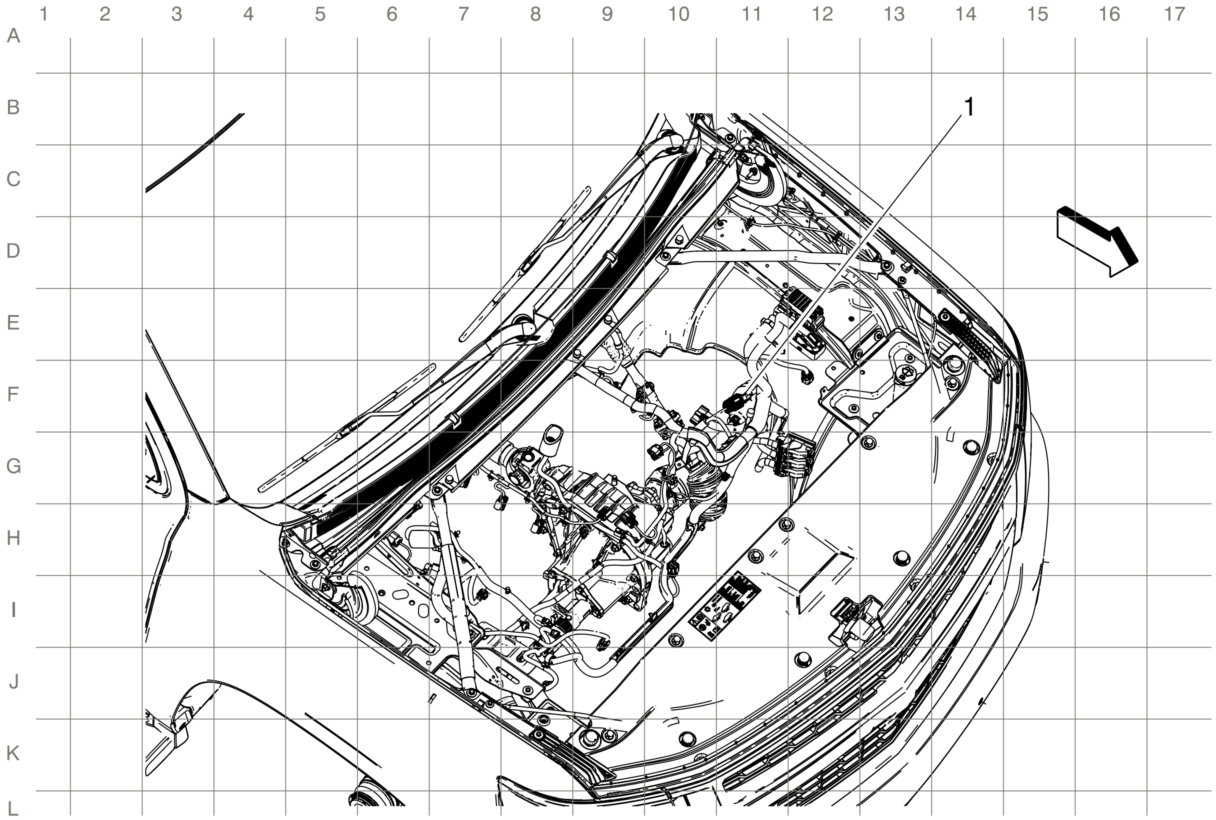
Power and Signal Distribution

Wiring Systems and Power Management

Schematic and Routing Diagrams

Harness Routing Views

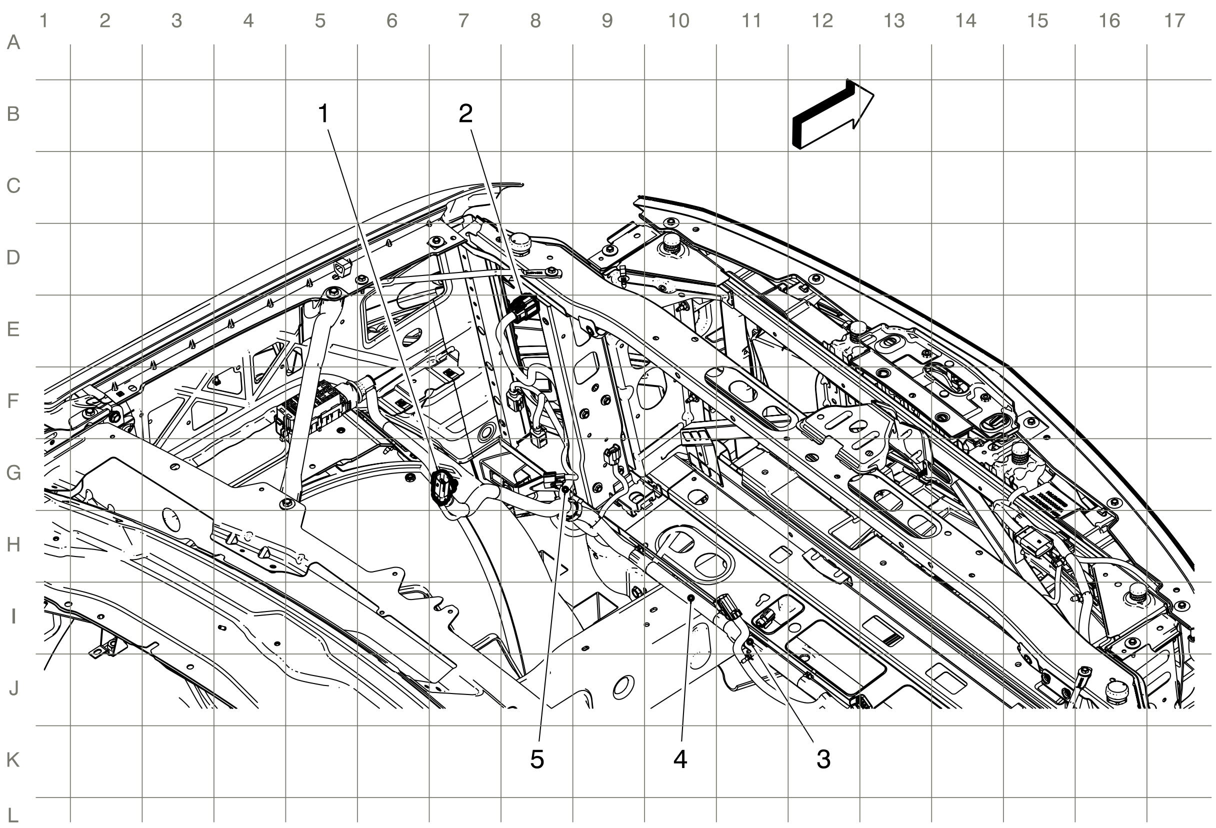
Front Axle Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1

Items

1. X125

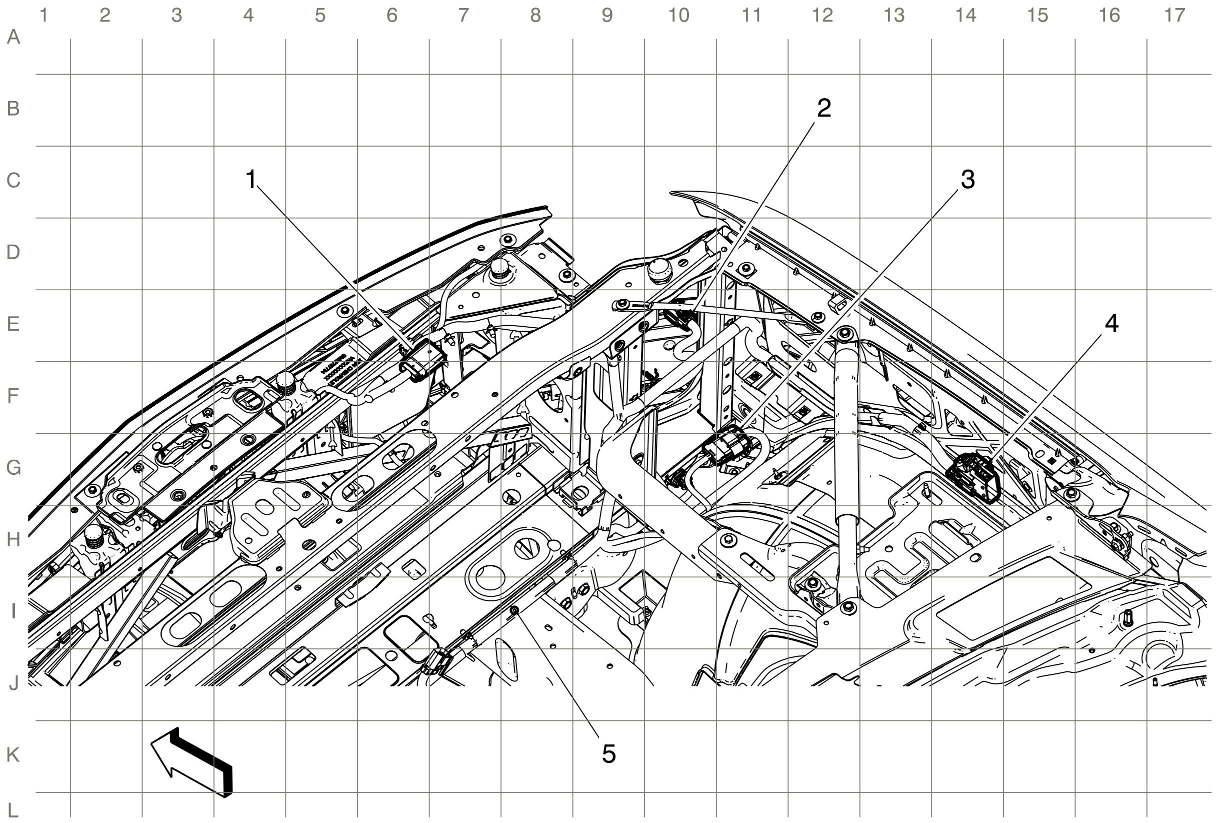
Forward Lamp Harness Routing - Left Engine Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
5
4
3

Items

1. X139
2. X110
3. J130
4. J106 (UGN with Z75)
5. J115

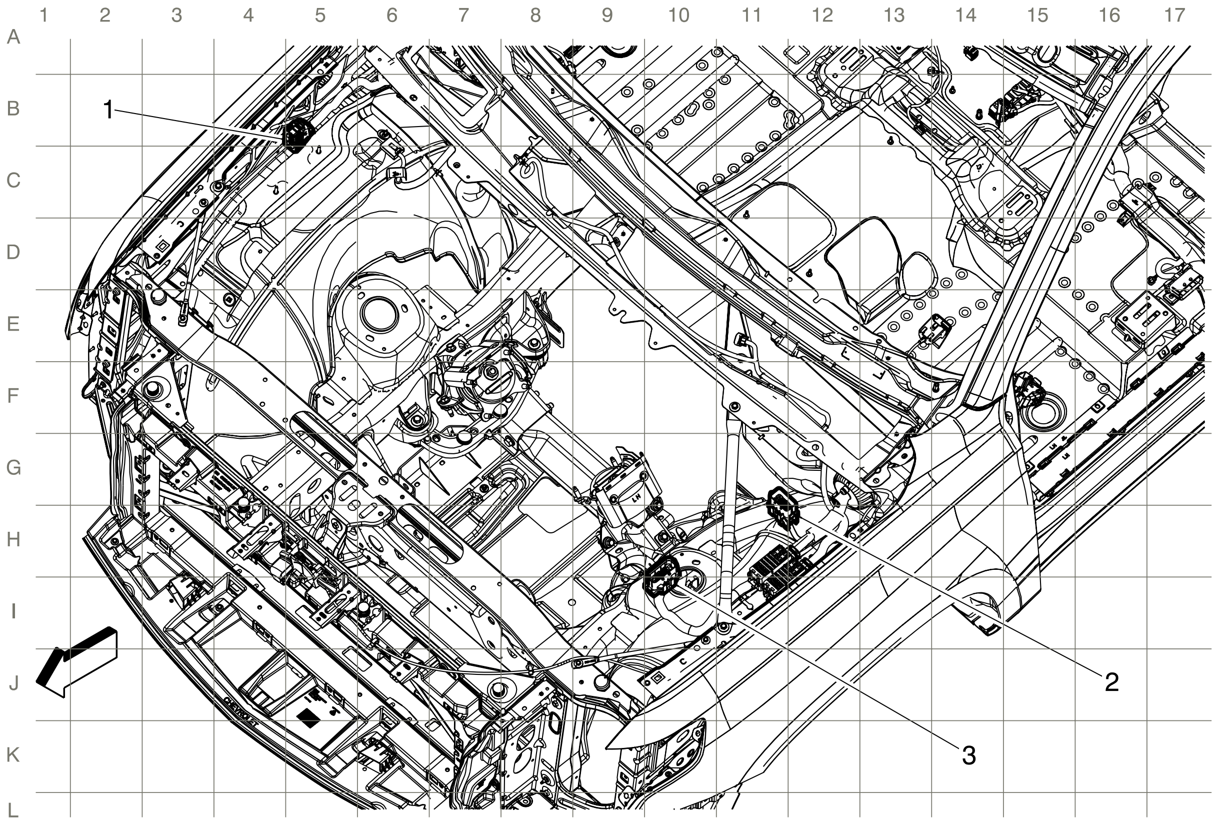
Forward Lamp Harness Routing - Right Engine Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5

Items

1. X100
2. X120
3. X122 (6J7)
4. X150
5. J125

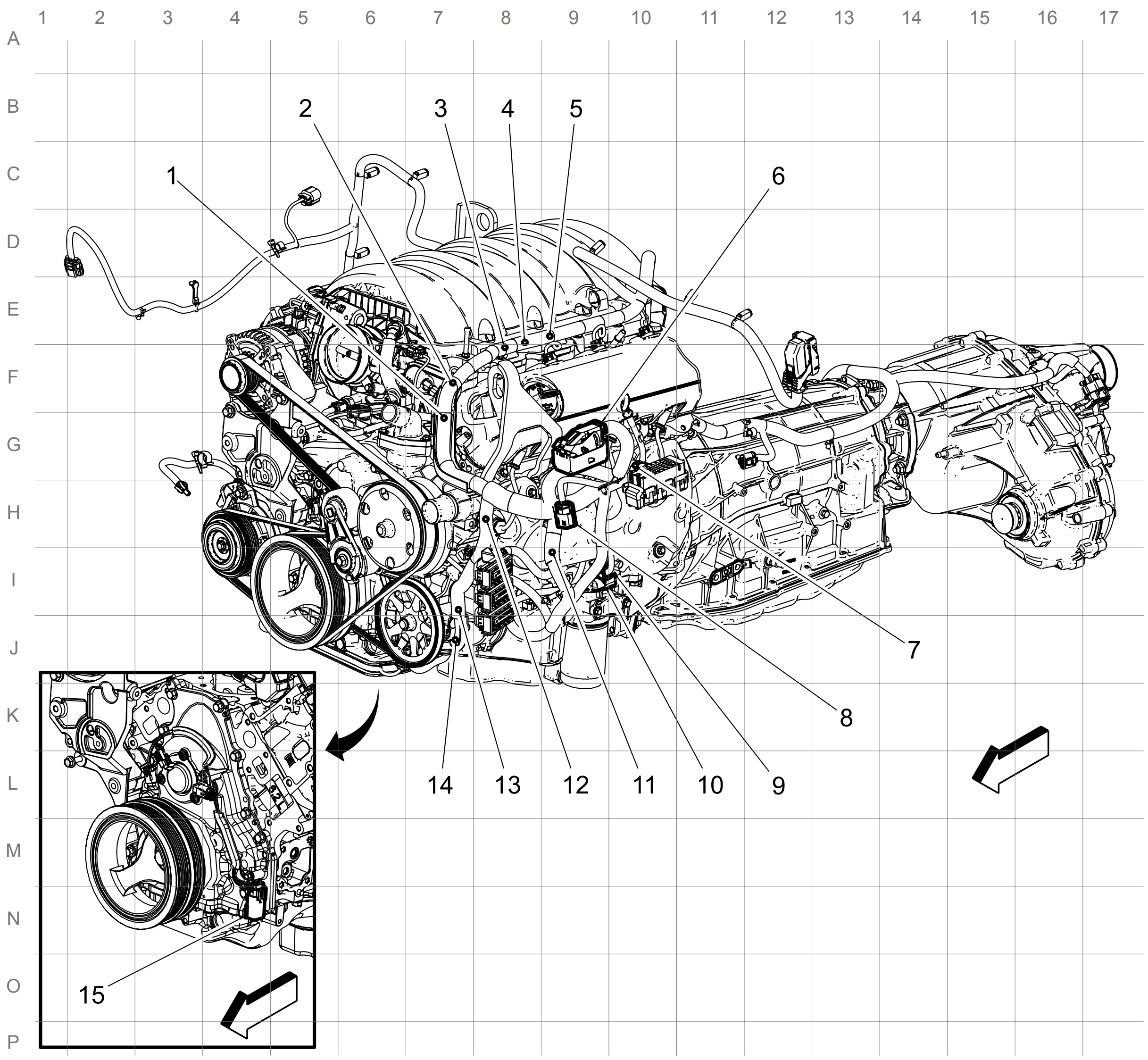
Body Harness Routing - Engine Compartment Top


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3

Items

1. X150
2. X185
3. X115

Engine Harness Routing - Left Front (L83 or L86)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Items

1. J126
2. J163 (L83 or L86)
3. J152 (K59)
4. J153 (K59)
5. J161
6. X115
7. J165
8. X139
9. X111 (NP0 or NQH)
10. X125
11. J127

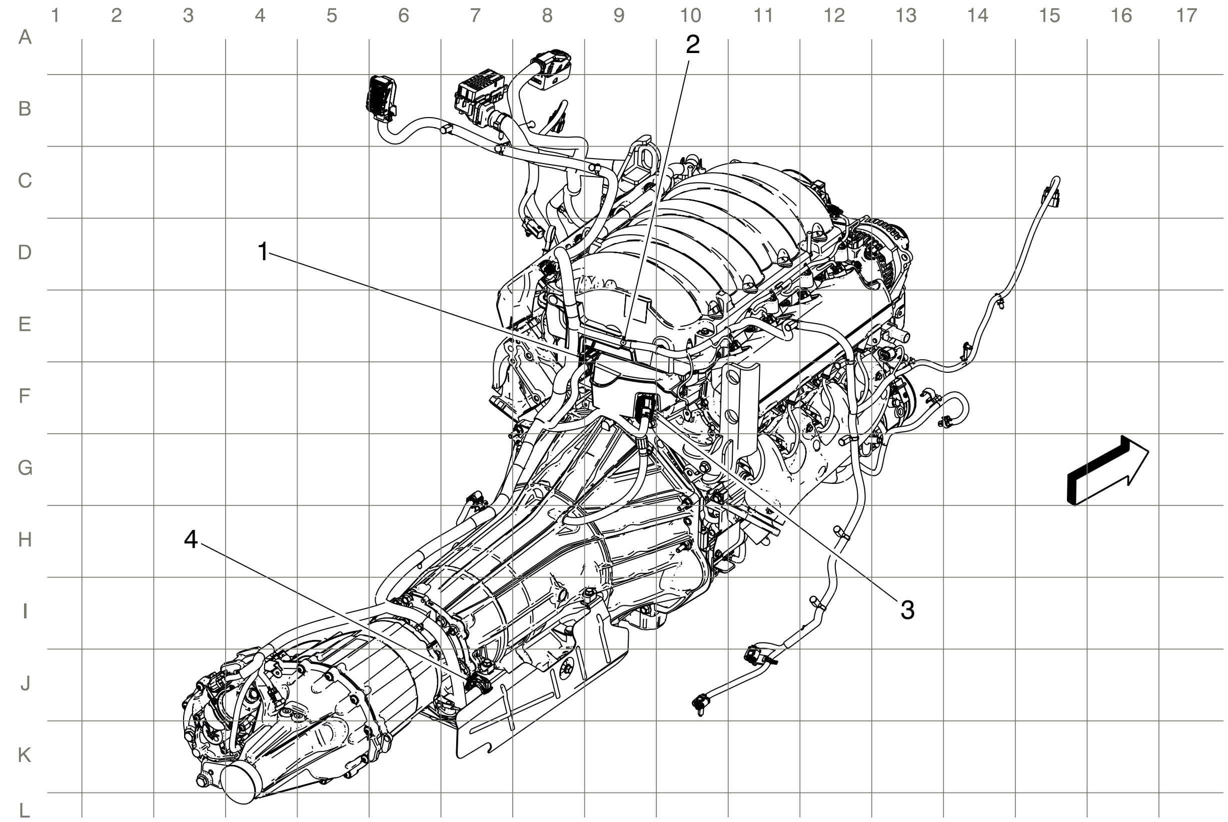
12. J124 (L83 or L86)

13. J150 (K59)

14. J151 (K59)

15. X154

Engine Harness Routing - Right Rear (L83 or L86)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
2
1
4
3

Items

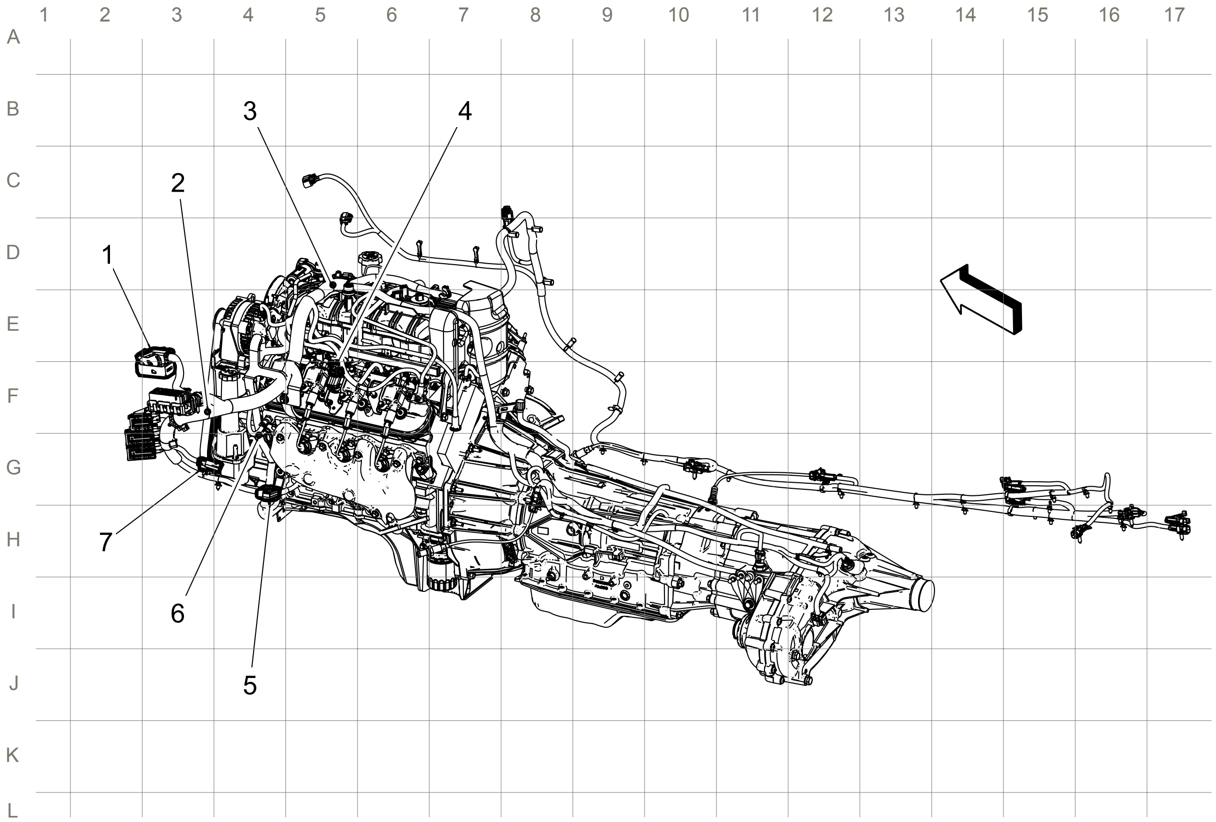
1. X161 (L83 or L86)

2. J161

3. X160 (L83 or L86)

4. X175 (M5U)

Engine Harness Routing - Left Rear (L96)

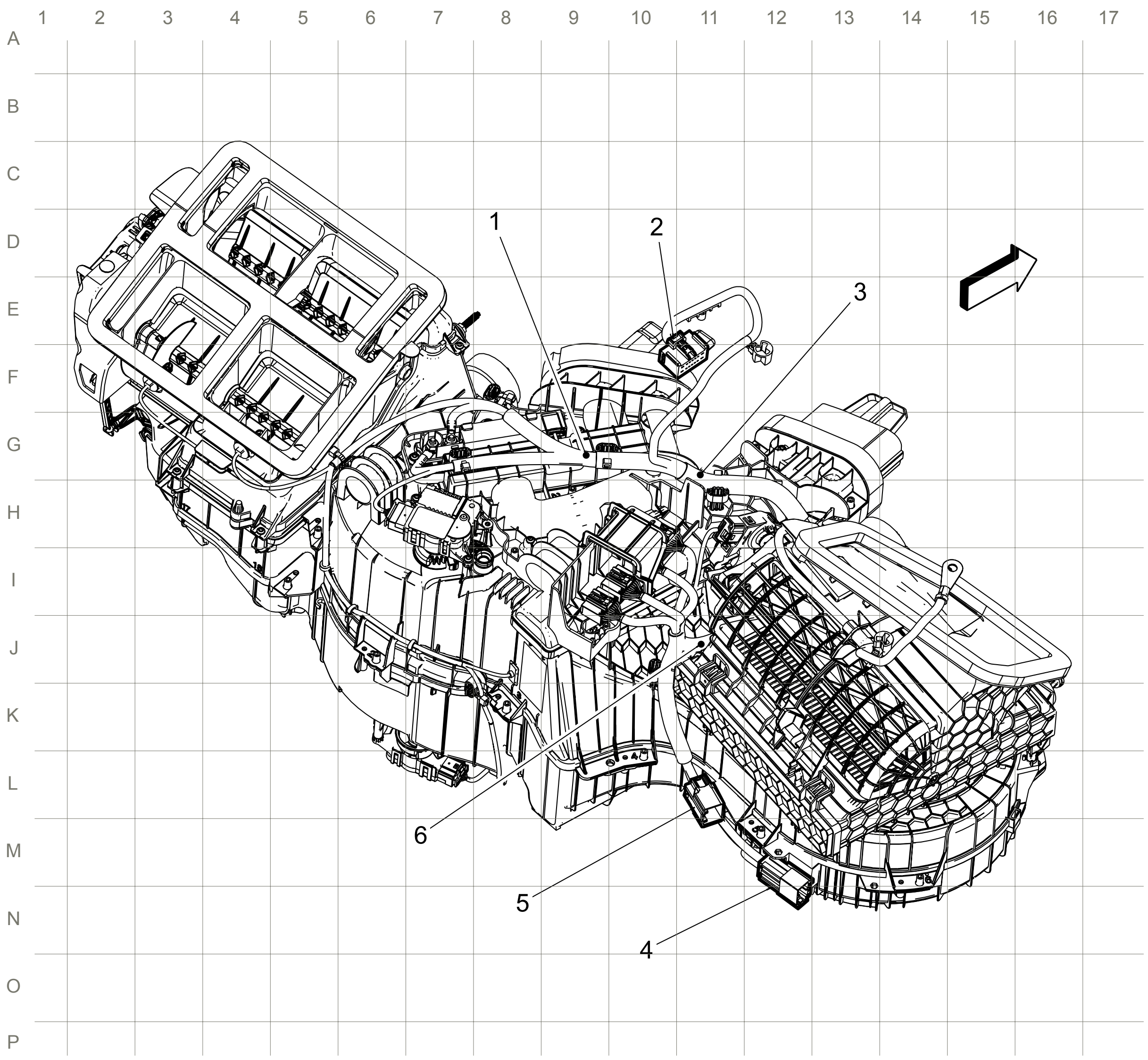


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
3
4
2
1
7
6
5

Items

1. X115
2. J165
3. J123 (L96)
4. X171 (L96)
5. X125
6. J127
7. X111 (NP0 or NQH)

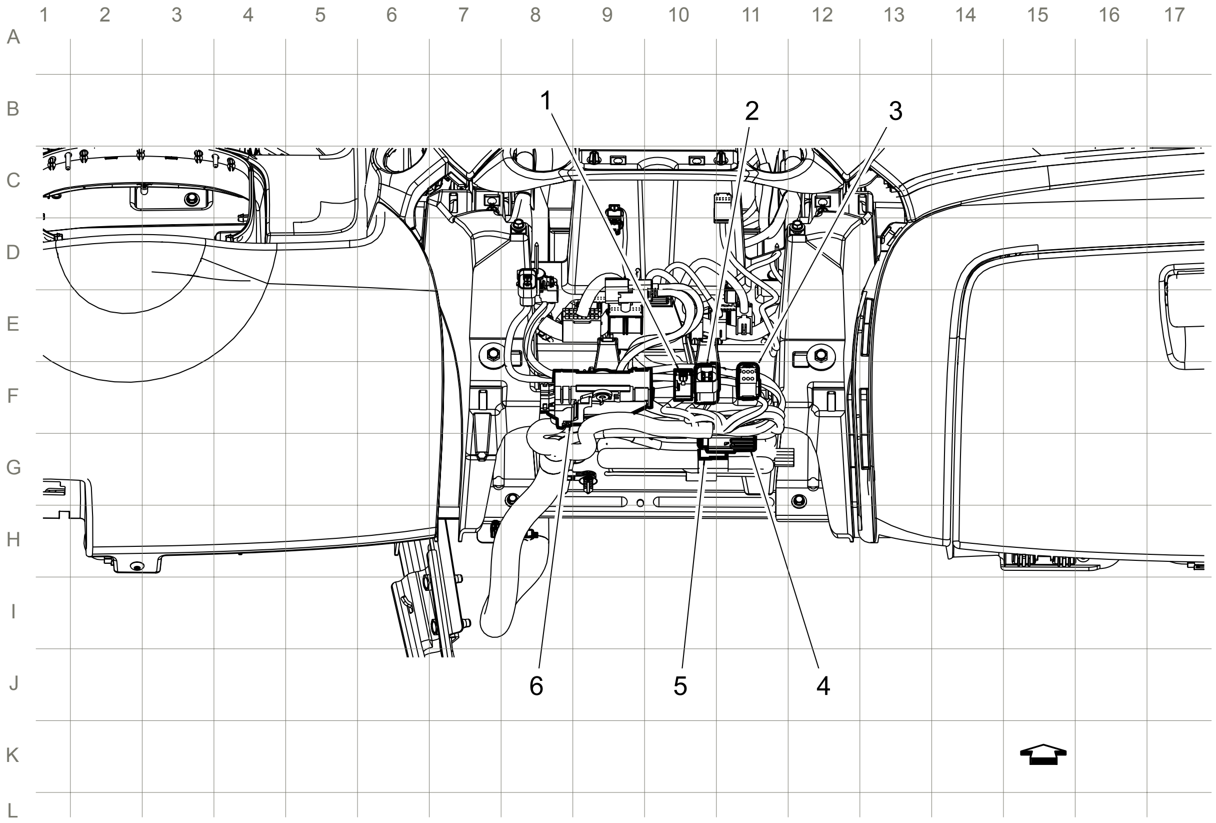
HVAC Assembly Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5
6

Items

1. J258
2. X215
3. J255
4. X217
5. X216
6. J257

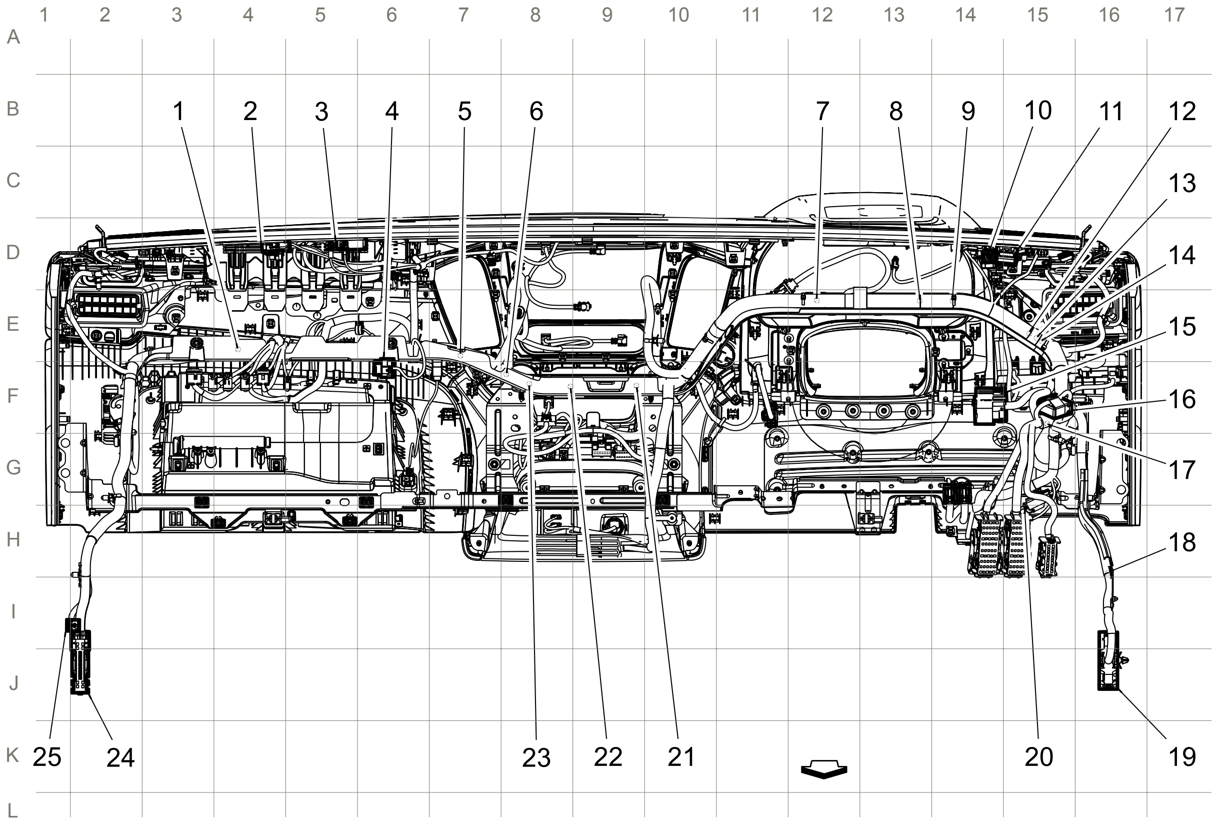
Instrument Panel Harness Routing - Bottom Center


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L

Items

1. X302 (D07)
2. X303 (D07)
3. X306 (KI4 or KI5 with D07)
4. X271 (WX7)
5. X272 (6J3 or 6J7)
6. X300 (D07)

Instrument Panel Harness Routing - Rear of Instrument Panel



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Items

1. J242
2. X222 (UE1)
3. X215
4. X205
5. J250 (IO5 or IO6 or TG5)
6. J260 (IO5 or IO6 with UE1, UEU, UFL, or UHX)
7. J212 (Z75)
8. J211
9. J205
10. X204 (U42)
11. X203
12. J201
13. J200
14. J210
15. X201

16. JX200

17. J208

18. J208

19. X225

20. J294

21. J220

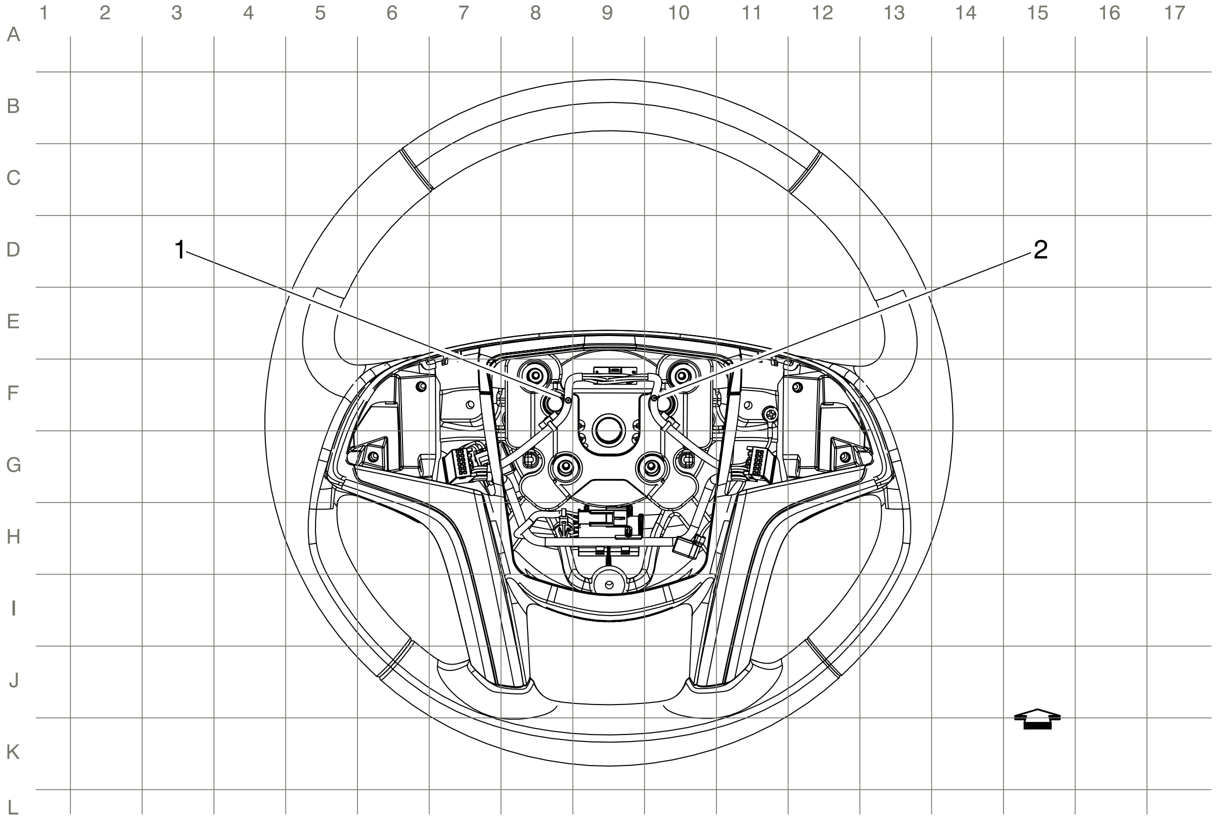
22. J249

23. J251

24. X275

25. X238 (AZ3)

Steering Wheel Harness Routing



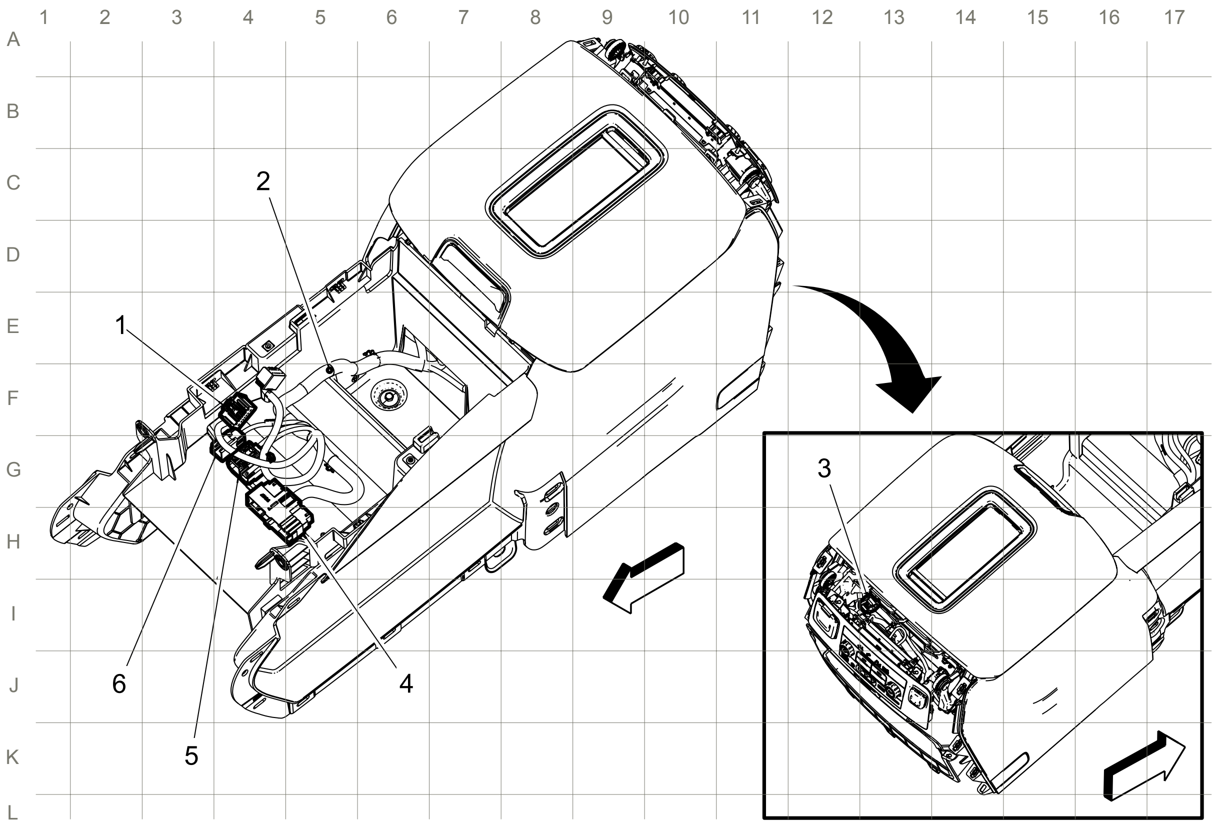
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2

Items

1. J285

2. J295

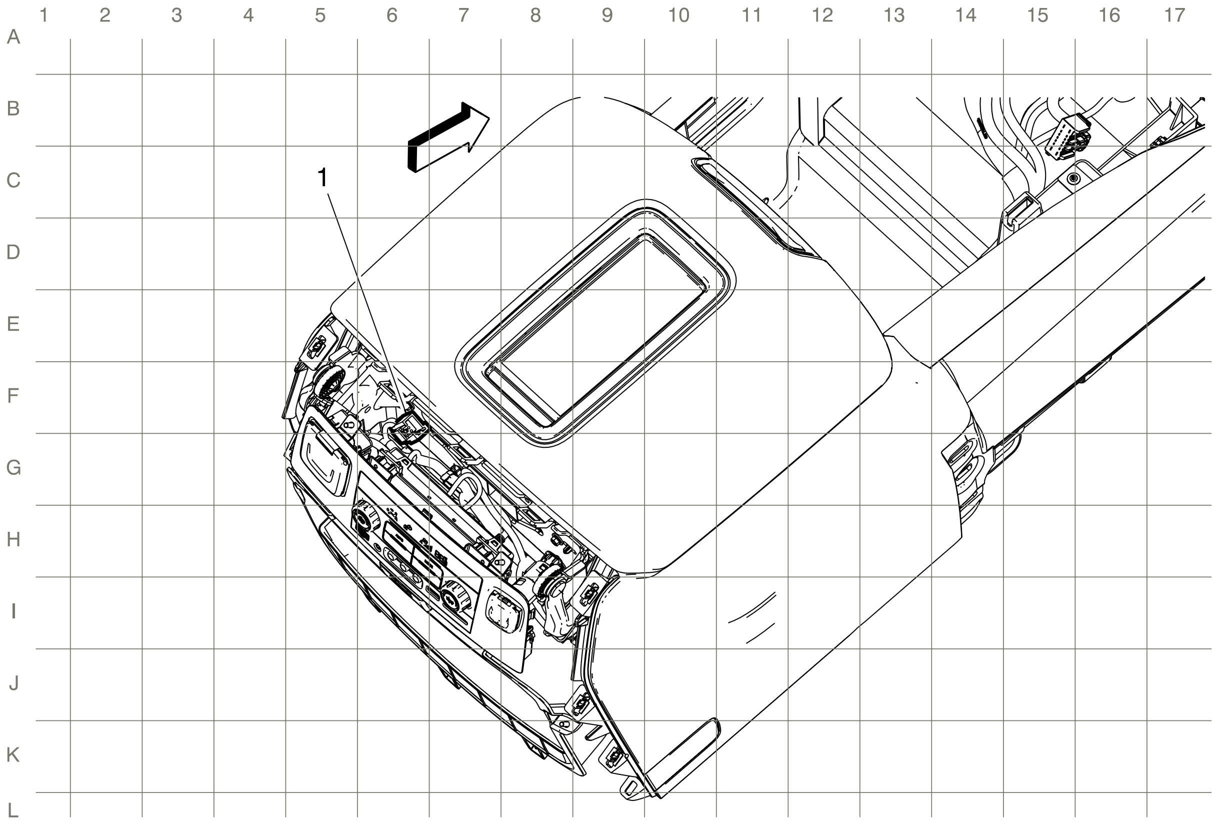
Floor Console Harness Routing - Top (X88 or Z88)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
2
1
6
5
4
3

Items

1. X307 (X88 or Z88 with D07)
2. J339 (D07 with DCK or K4C)
3. X313 (DCK)
4. X300 (D07)
5. X304 (AZ3)
6. X306 (KI4 or KI5 with D07)

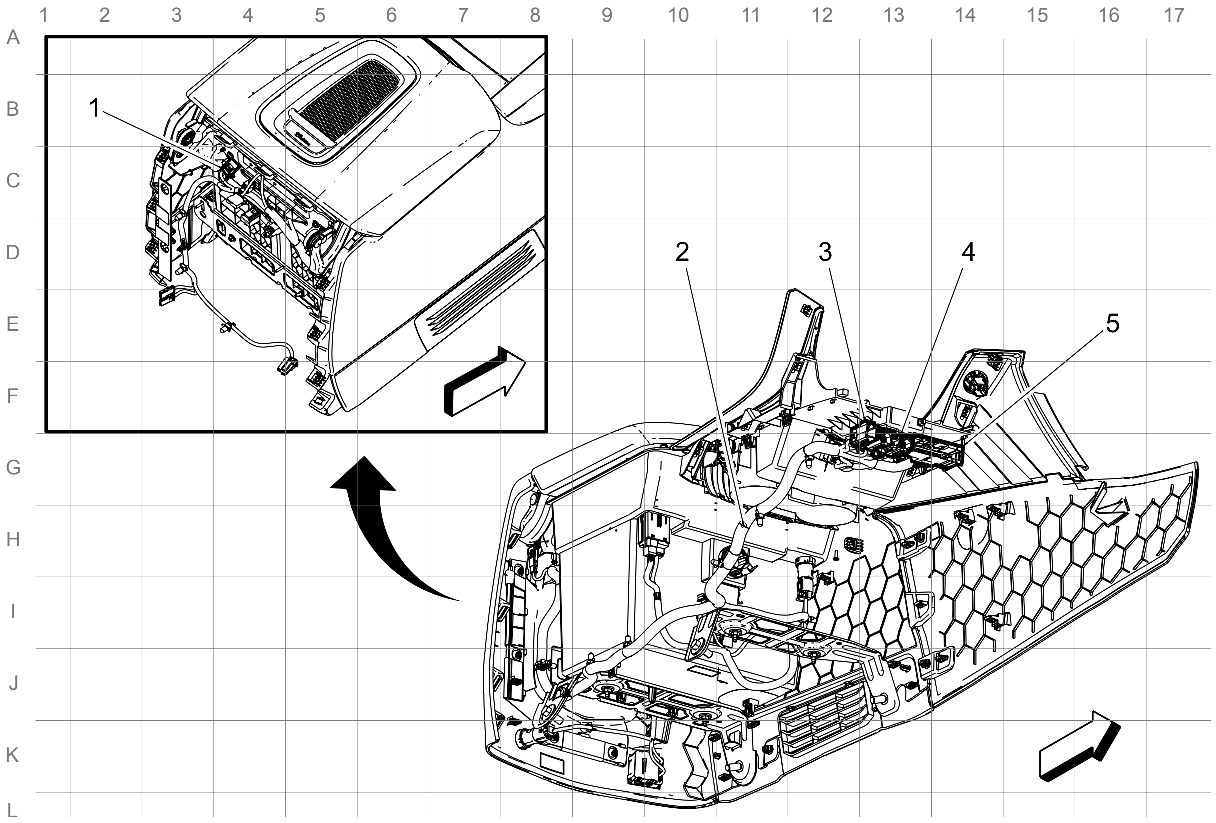
Floor Console Harness Routing - Rear (X88 or Z88)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1

Items

1. X313 (DCK)

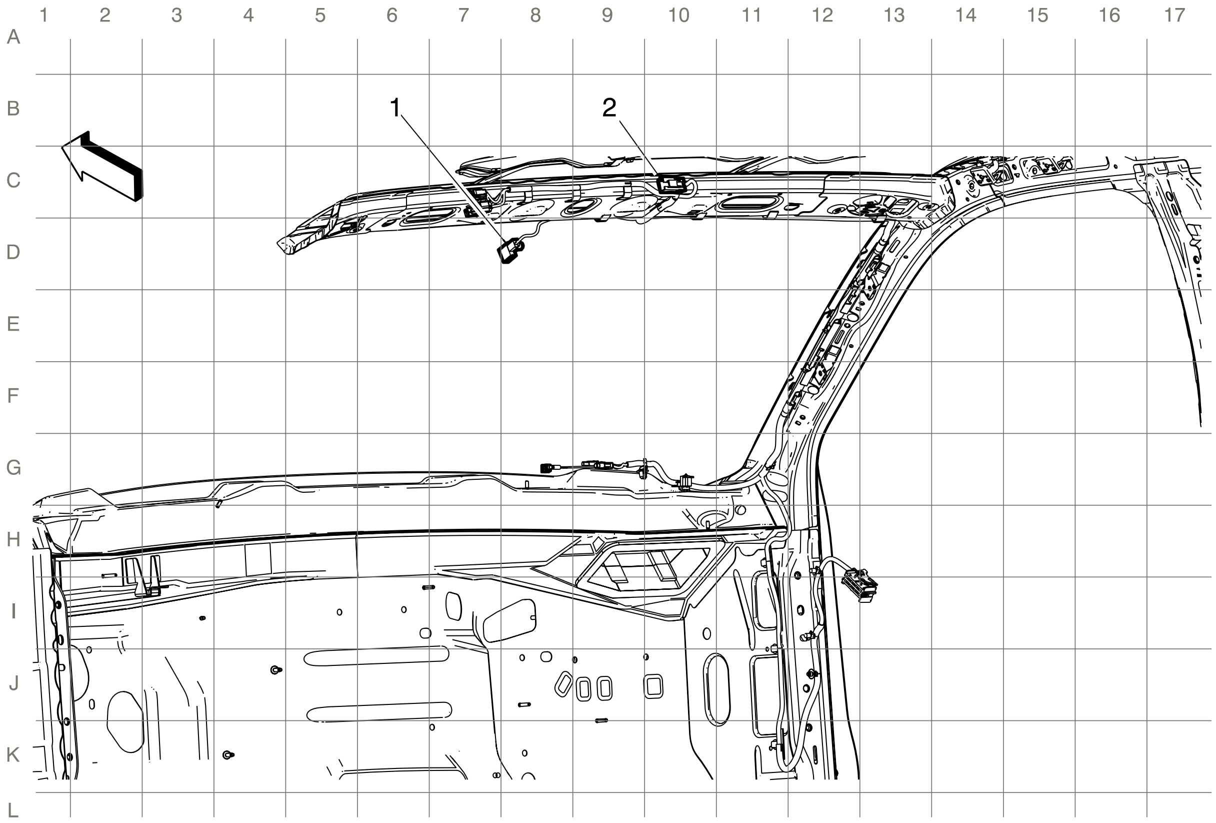
Floor Console Harness Routing - Bottom Front (Z75)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5

Items

1. X313 (DCK)
2. J339 (D07 with DCK or K4C)
3. X306 (KI4 or KI5 with D07)
4. X304 (AZ3)
5. X300 (D07)

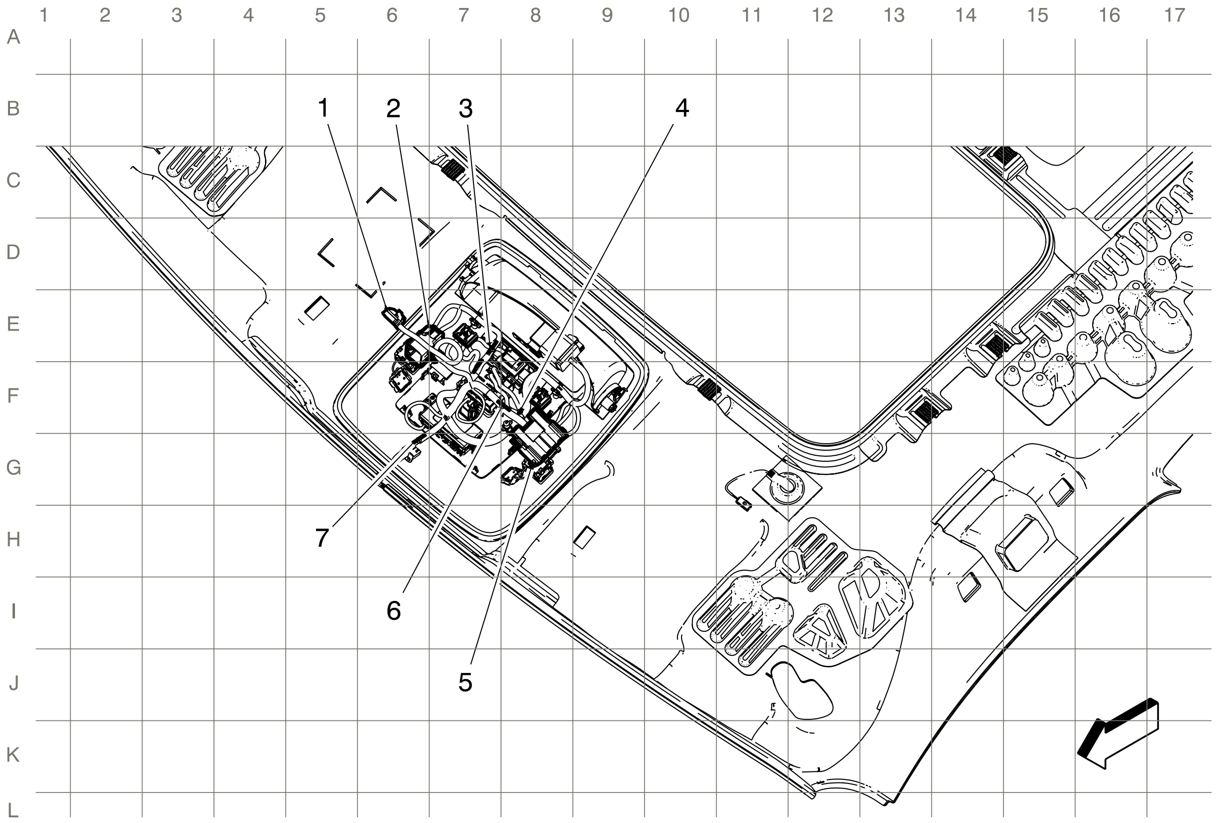
A-Pillar Harness Routing - Right Passenger Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2

Items

1. X318
2. X319 (CF5 or TRW)

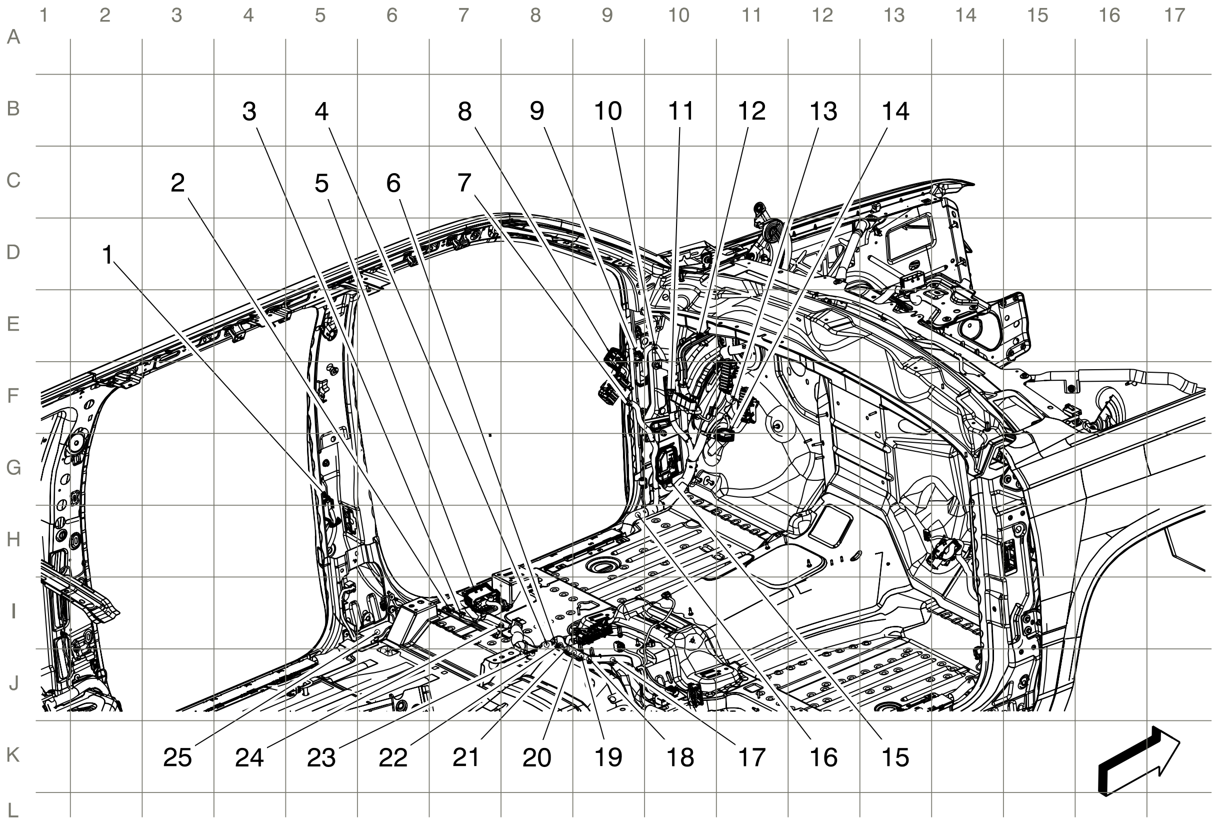
Overhead Console Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
7
6
5

Items

1. X319 (CF5 or TRW)
2. X324 (CF5)
3. J303
4. J302
5. X316
6. J301
7. J333

Body Harness Routing - Left Front of Passenger Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
3
4
8
9
10
11
12
13
14
2
5
6
7
1
25
24
23
22
21
20
19
18
17
16
15

Items

1. X700
2. J330 (BTM or UGN)
3. J331
4. J382 (BRS, DL3, DR4 or HD7)
5. X310
6. J306
7. J308
8. X315 (NKC, UGN or UTT)
9. X500
10. J307 (DL3 or DR4)
11. J304 (Z75)
12. J289
13. J309 (JL1, NP0 or NQH)
14. X119
15. X225

16. J310 (UTT)

17. J350

18. J384

19. J385 (ULT)

20. J379 (DL3, DL8 or DR4)

21. J386

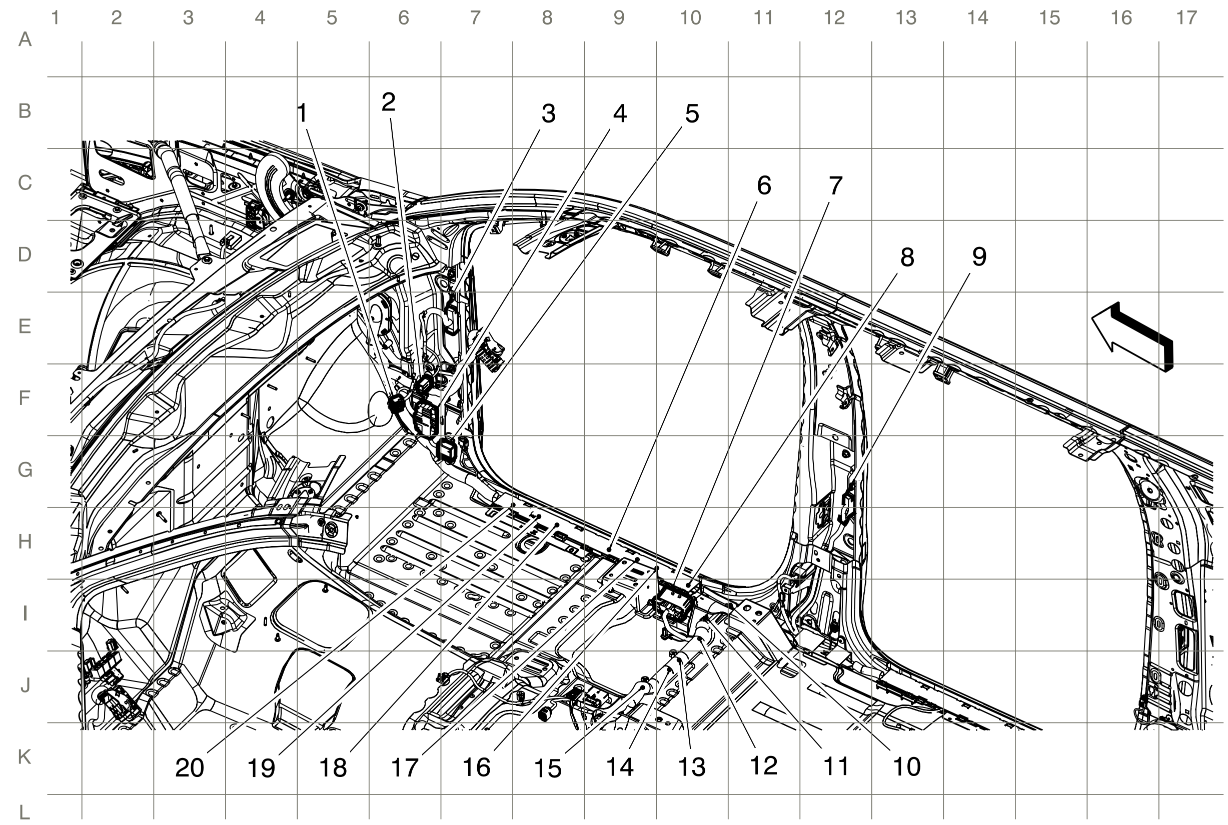
22. J383

23. J361

24. J334 (UGN with Z75)

25. J353

Body Harness Routing - Right Front of Passenger Compartment

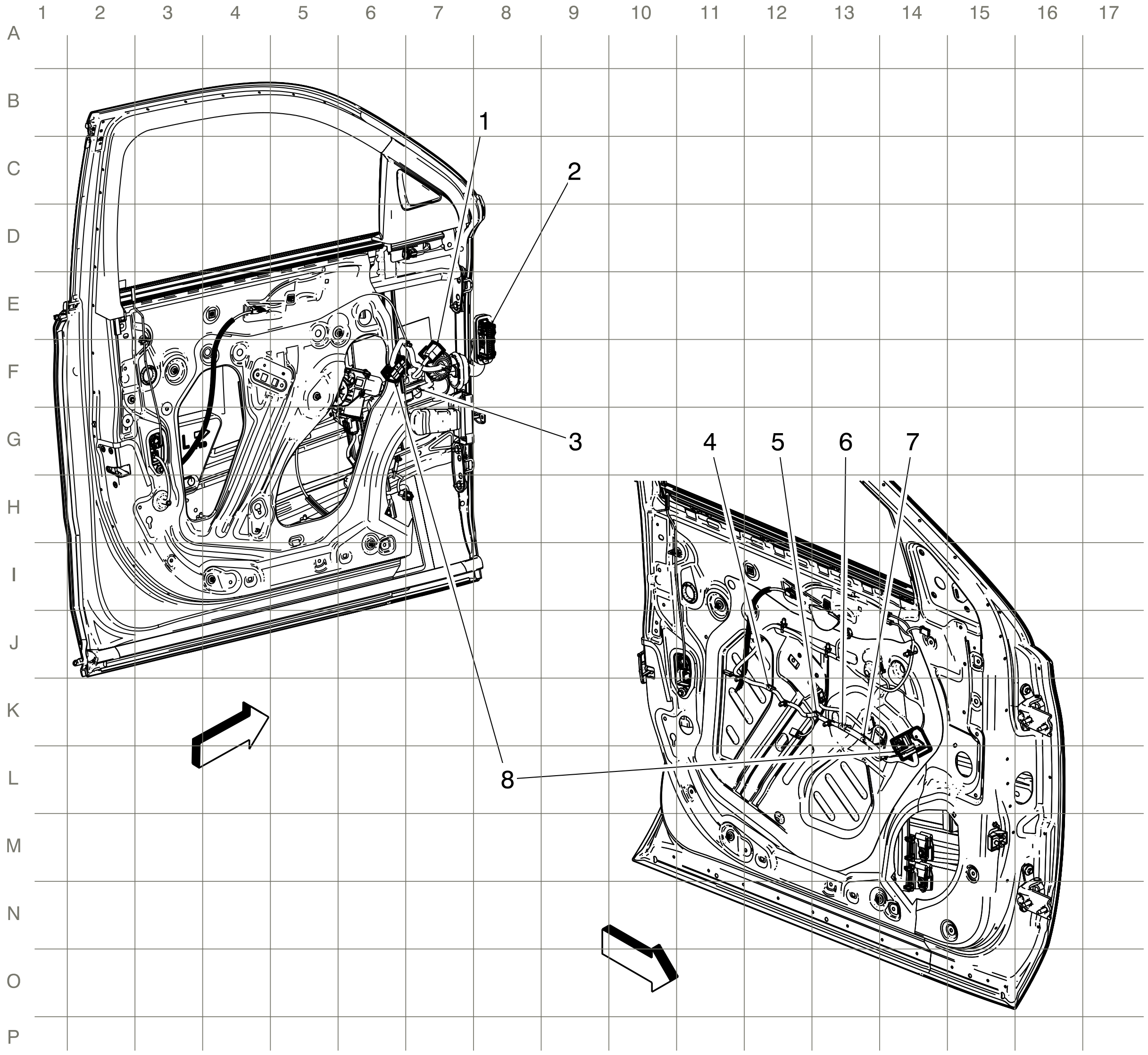

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9
6
7
8
9
20
19
18
17
16
15
14
13
12
11
10

Items

1. X216
2. X217
3. X600
4. X275
5. JX300 (UD5)
6. J369
7. X320
8. J370 (KA1, KA6 or UTT)
9. X800
10. J362 (AZ3, AX7, ATN, ATT, KA6 or Z75)
11. J364 (Z75)
12. J373 (UTT)
13. J372 (A45)
14. J371
15. J322 (without SWB or Z75)

16. J360
17. J363
18. J368
19. J365
20. J367 (DL3 or DR4)

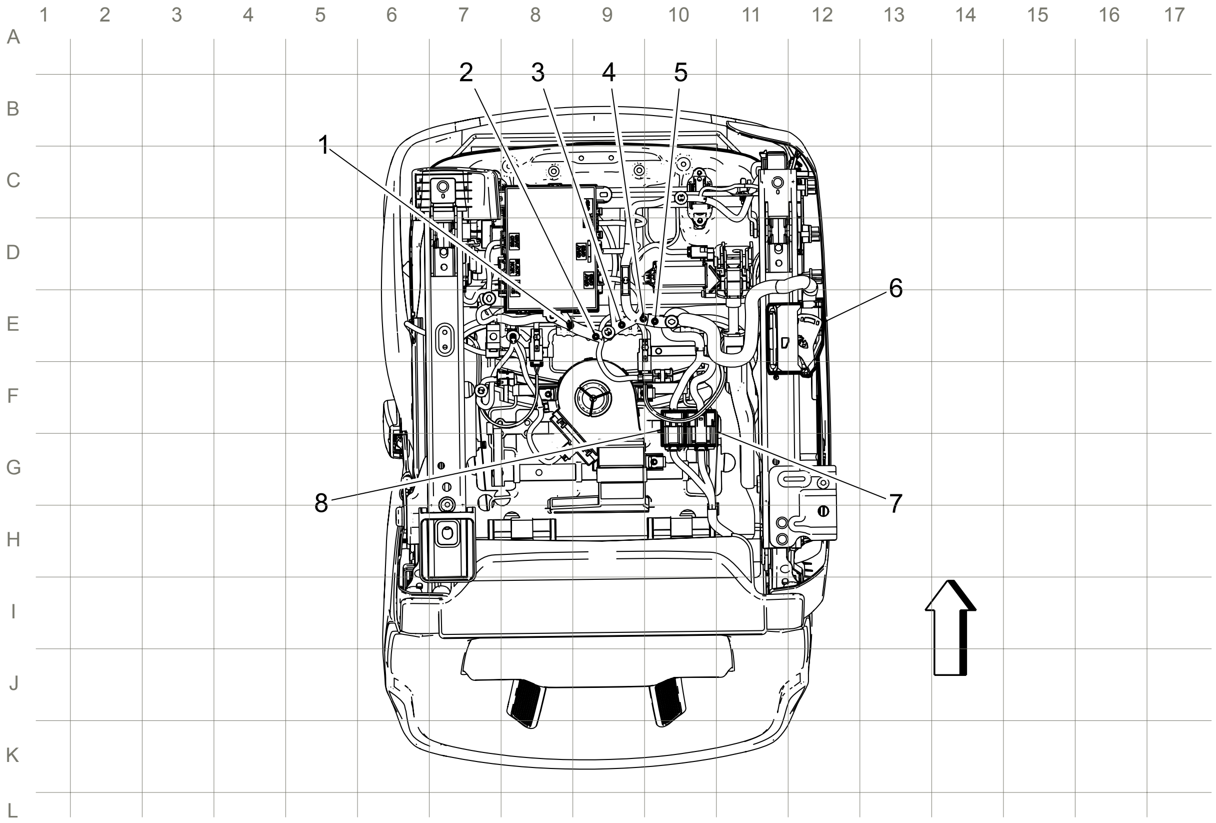
Driver Door Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5
6
7
8

Items

1. X510
2. X500
3. J515
4. J520 (Z75)
5. J518 (HD7)
6. J519
7. J516
8. X505

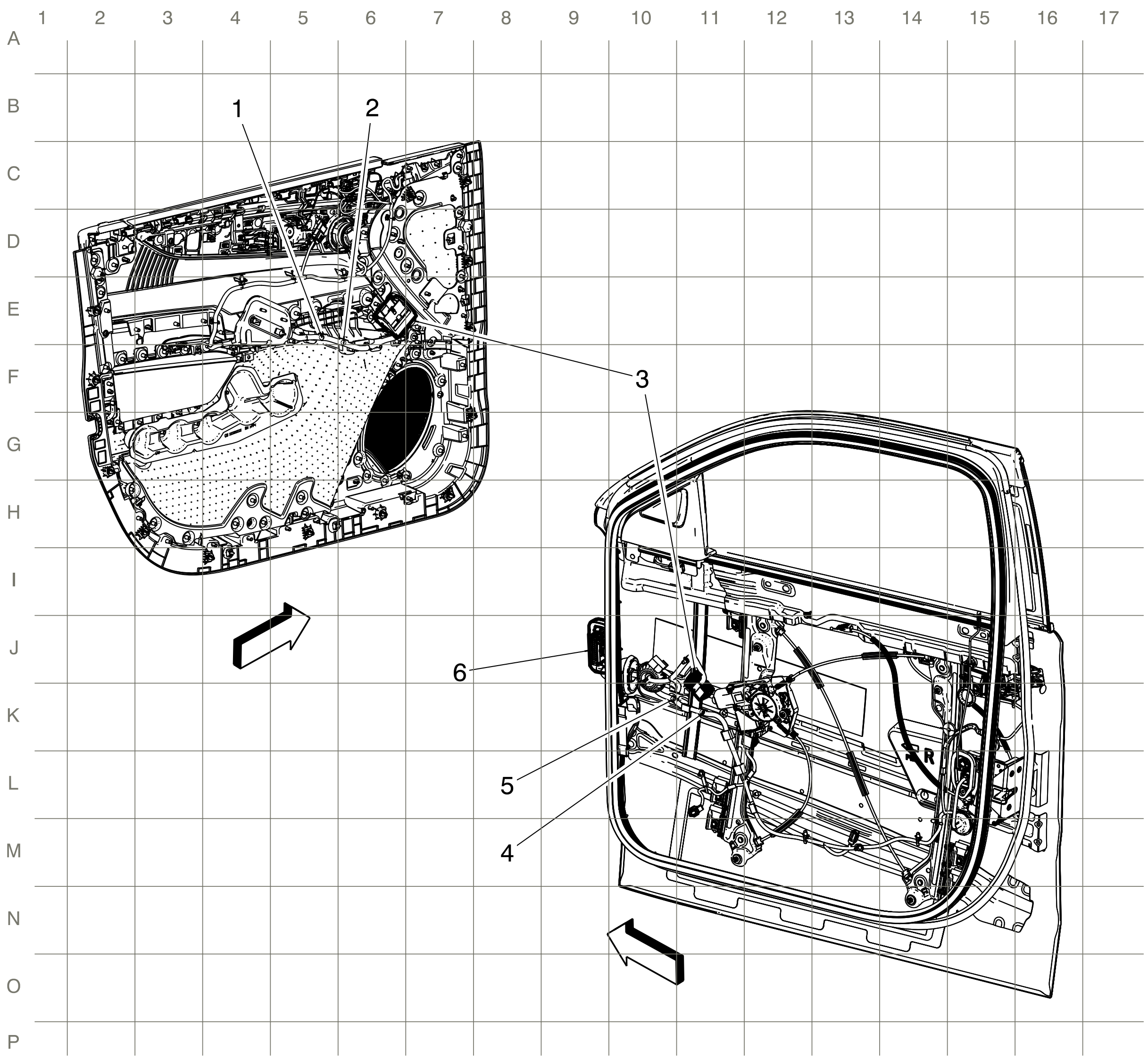
Driver Seat Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
2
3
4
5
1
6
8
7

Items

1. J314
2. J315
3. J313
4. J317 (KB6)
5. J316 (KB6)
6. X310
7. X312
8. X311 (without ULT)

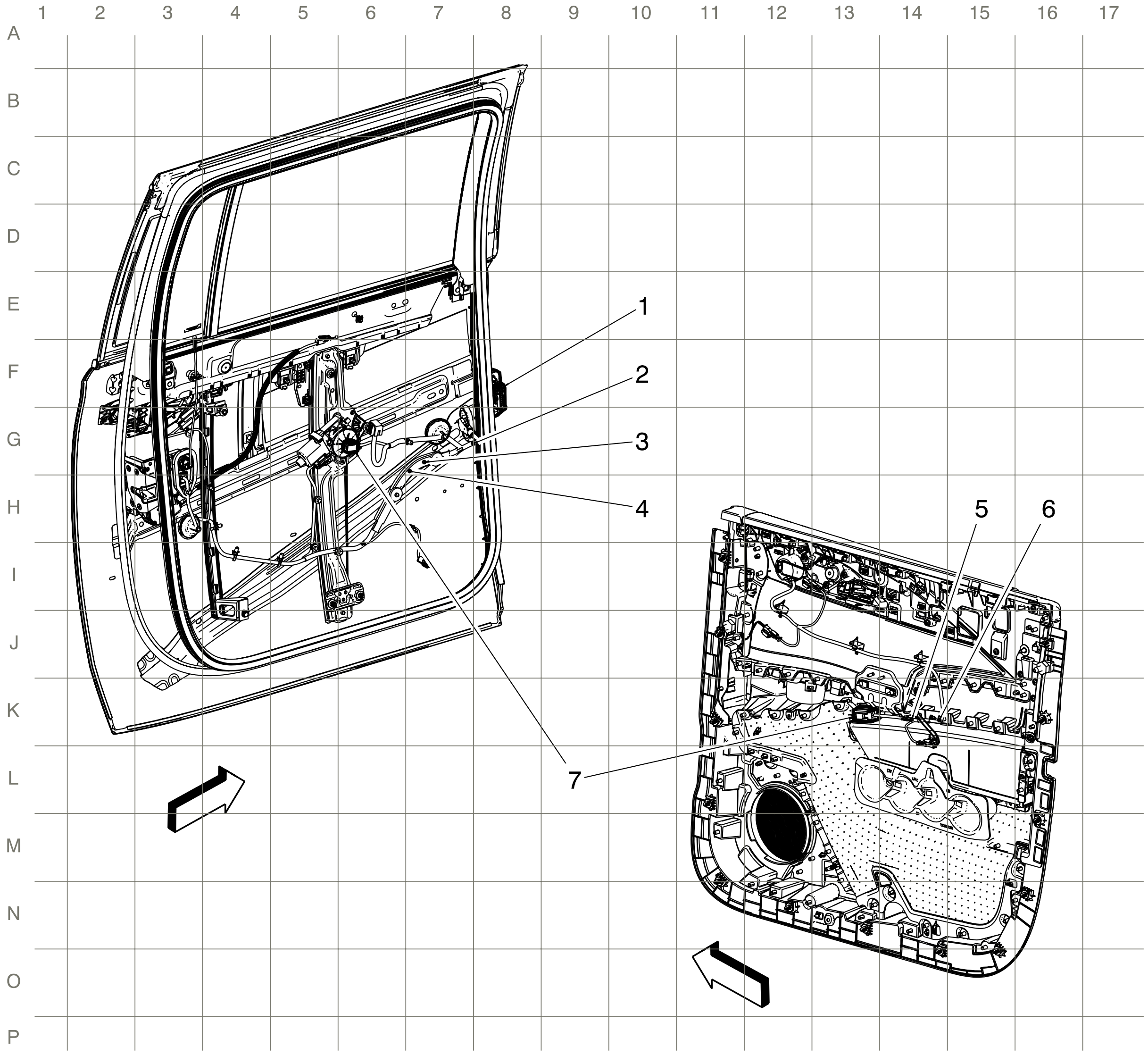
Passenger Door Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
6
5
4

Items

1. J620 (Z75)
2. J616
3. X605
4. J611 (HD7)
5. J615
6. X600

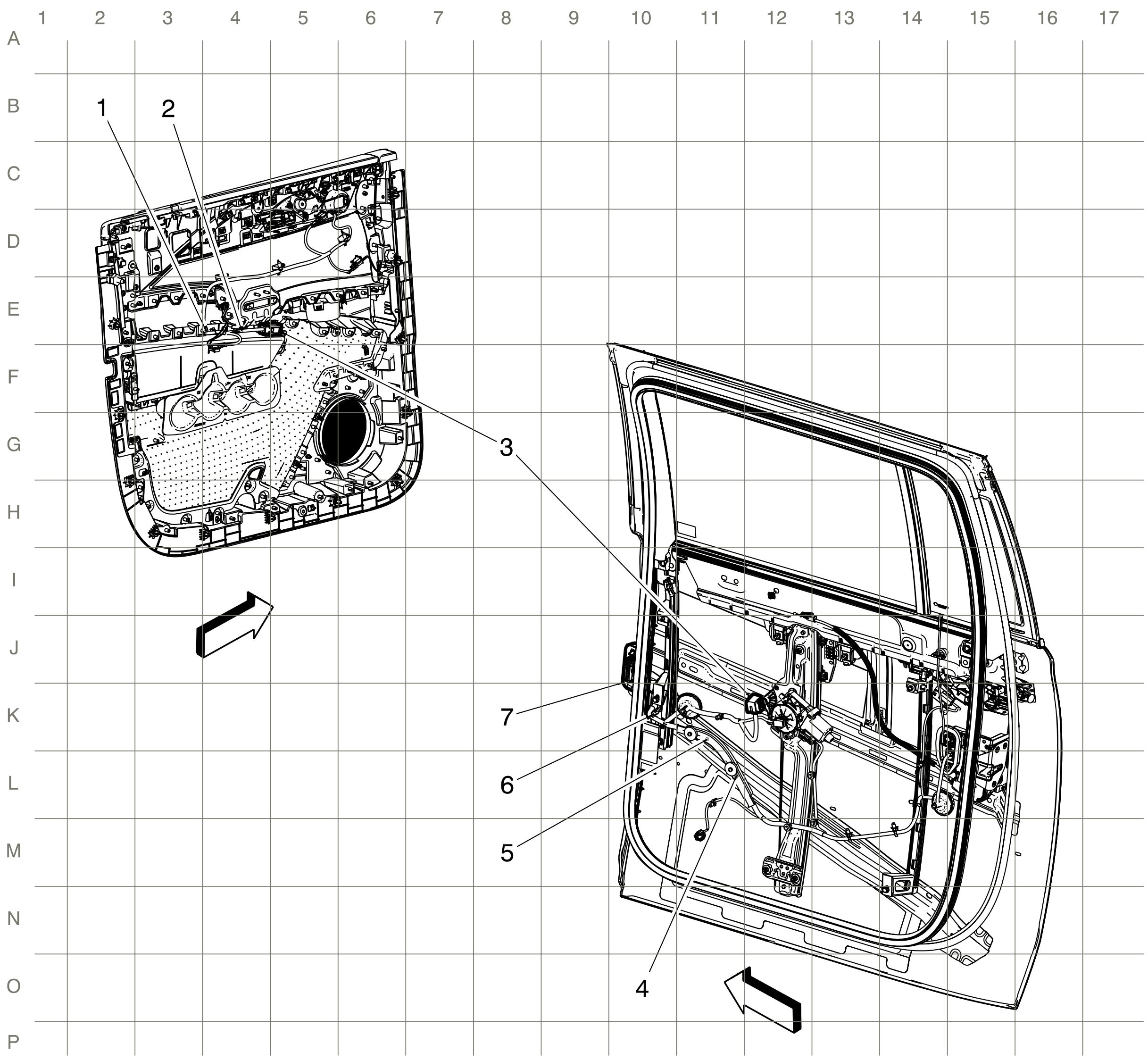
Left Rear Door Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5
6
7

Items

1. X700
2. J715
3. J710 (UQH)
4. J711 (UQH)
5. J116 (Z75)
6. J720 (Z75)
7. X705 (Z75)

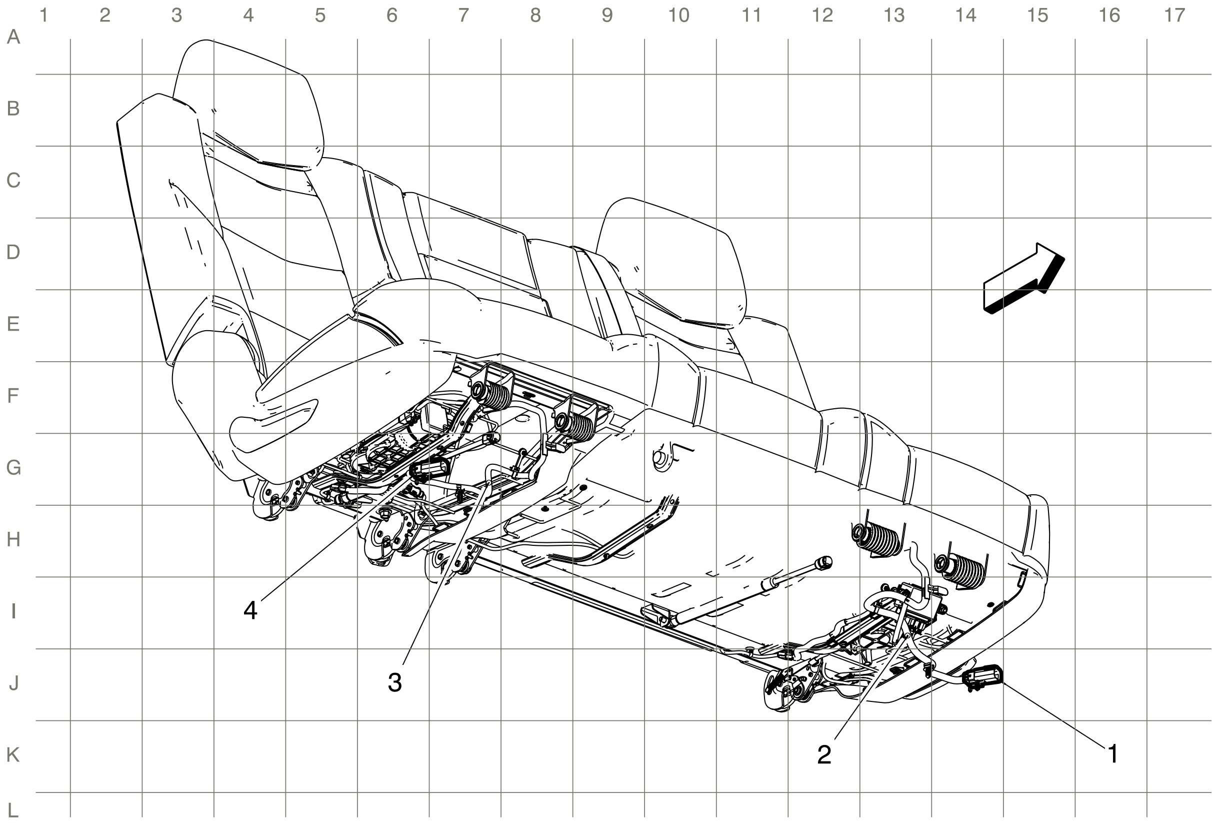
Right Rear Door Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
7
6
5
4

Items

1. J820 (Z75)
2. J816 (Z75)
3. X805 (Z75)
4. J811 (UQH)
5. J810 (UQH)
6. J815
7. X800

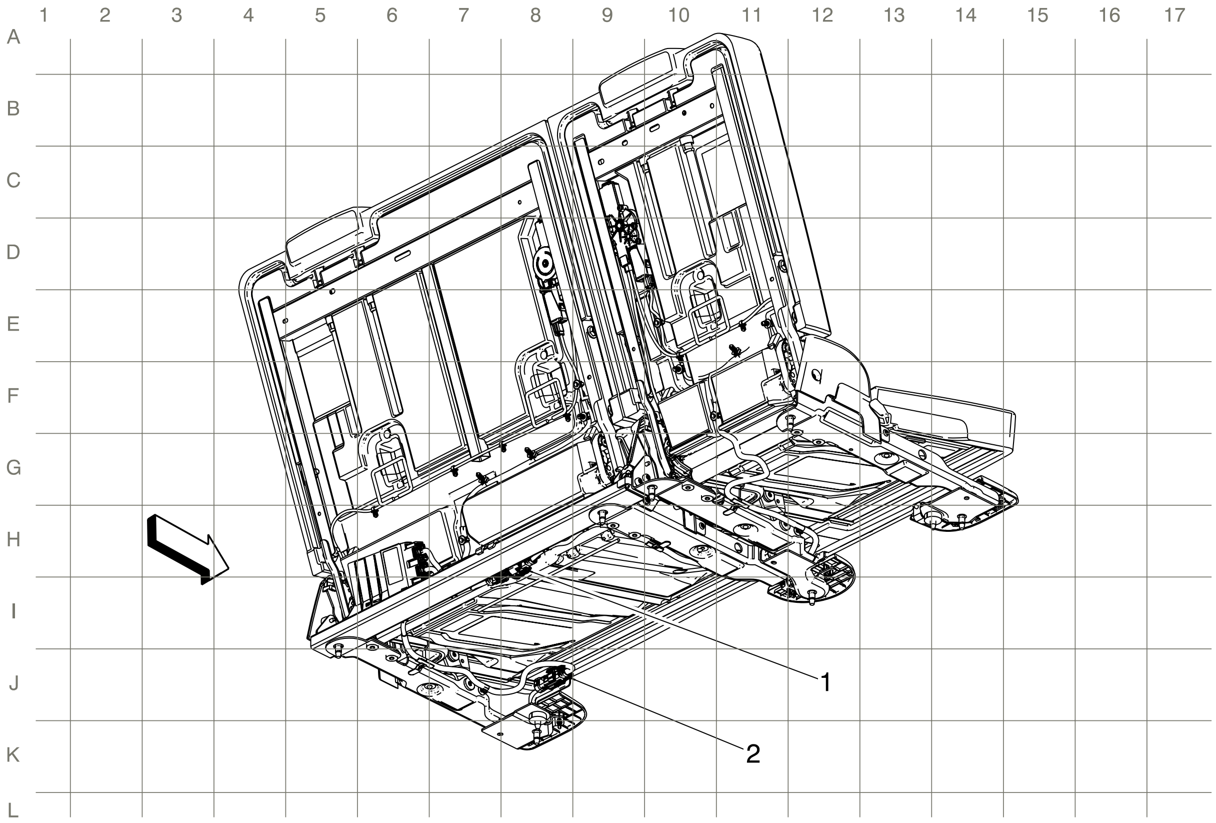
Second Row Seat Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
4
3
2
1

Items

1. X308 (ATN, ATT or KA6)
2. J357 (ATN or ATT with KA6)
3. J366 (ATN or ATT with KA6)
4. X378 (ATN or ATT)

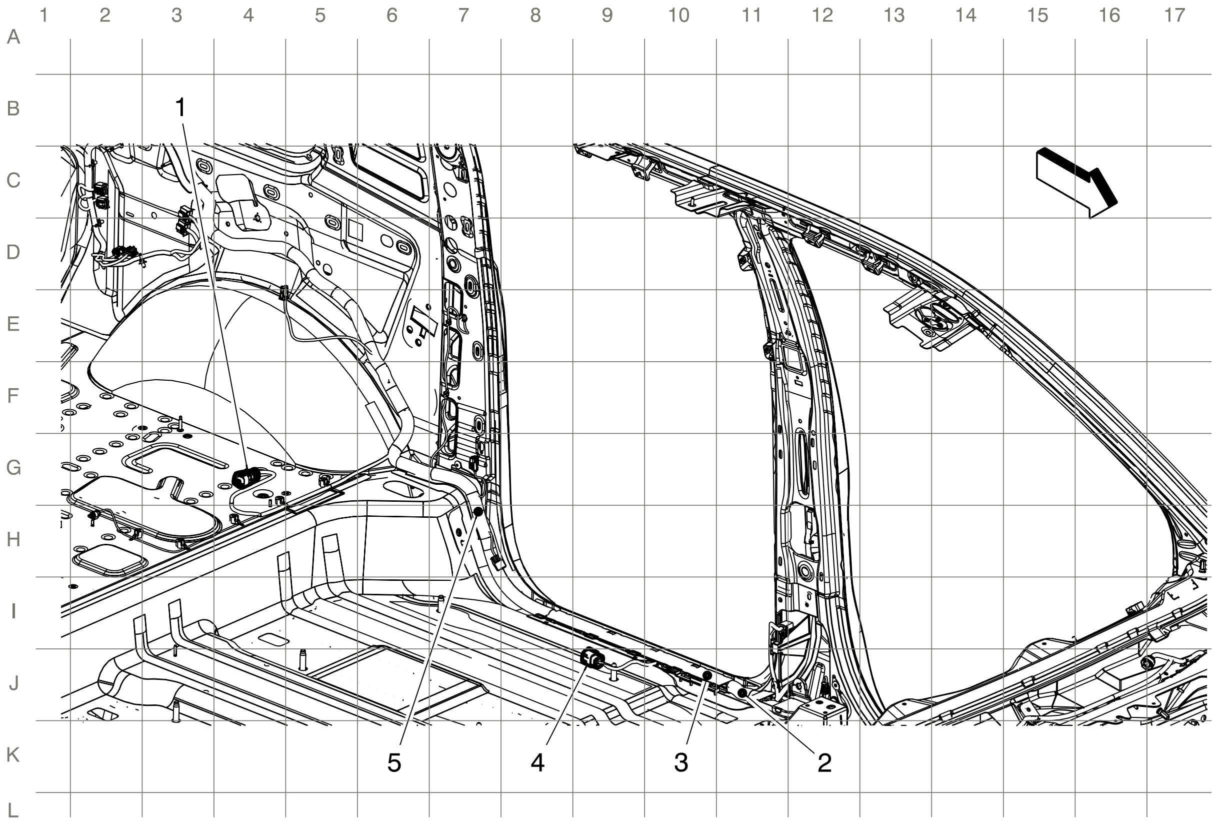
Third Row Seat Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2

Items

1. X340 (AS8)
2. X338 (AS8)

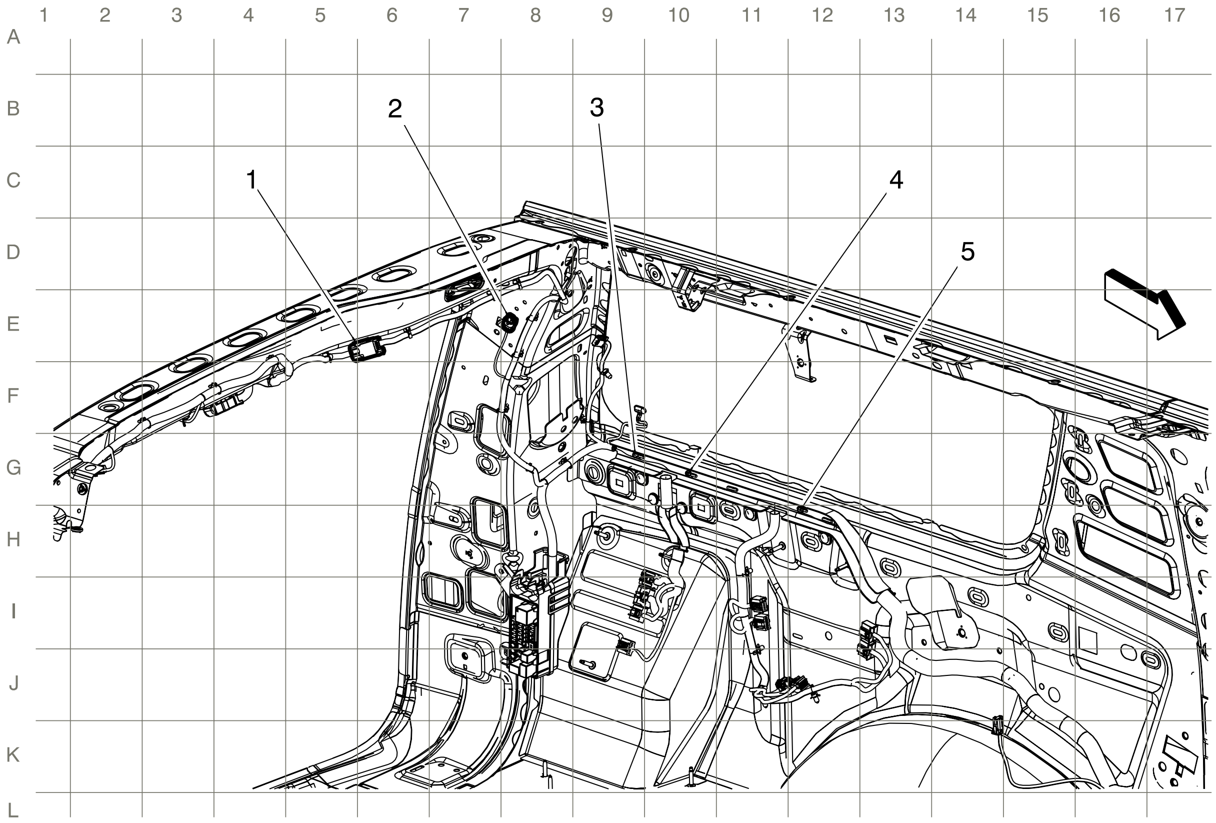
Body Harness Routing - Left Middle of Passenger Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
5
4
3
2

Items

1. X338 (AS8)
2. J351 (BTM)
3. J352 (ATN or ATT)
4. X308 (ATN, ATT or KA6)
5. J354

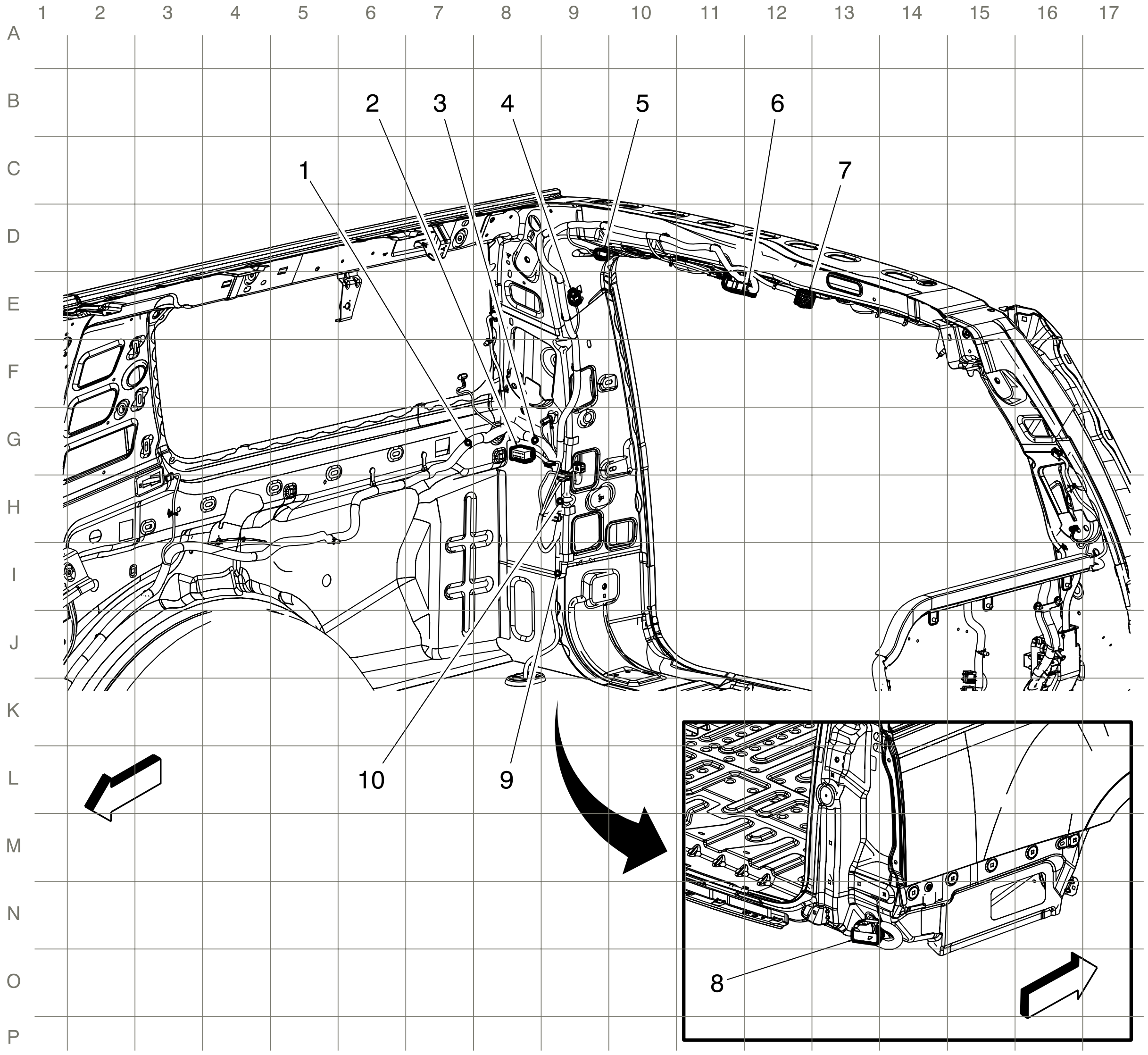
Body Harness Routing - Left Rear of Passenger Compartment


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
2
3
1
4
5

Items

1. X490
2. X380
3. J462 (UQS)
4. J461 (UQS)
5. J460 (ATN or ATT)

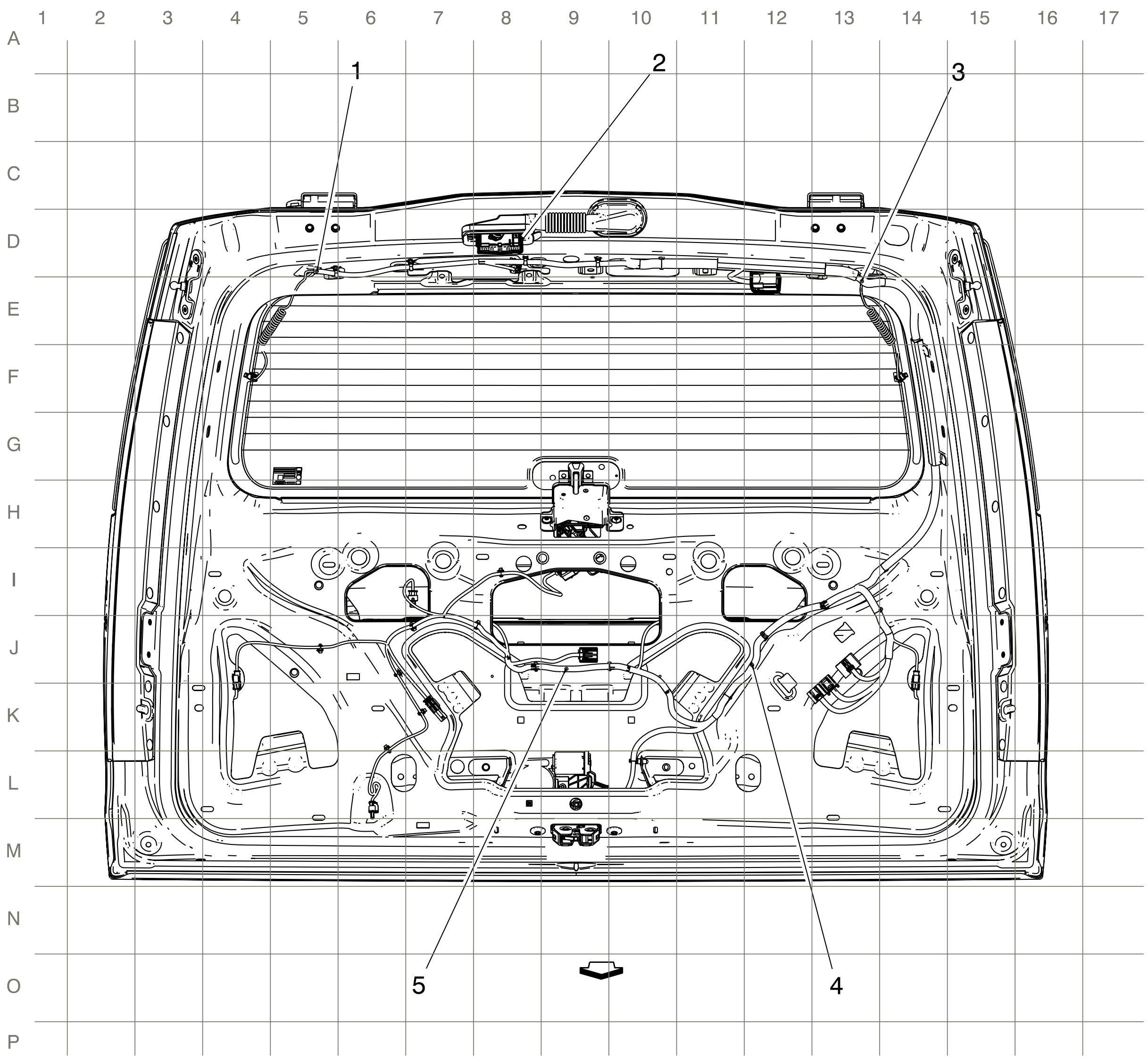
Body Harness Routing - Right Rear of Passenger Compartment


1
2
3
4
5
6
7
8
9
10
A B C D E F G H I J K L M N O P
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Items

1. J402
2. X487
3. J403 (K59, TC2, UEU, UFL UHX, UGN or UKC)
4. X390
5. X486 (without SWB)
6. X900
7. X490
8. X495
9. J401 (ATN or ATT)
10. J404 (ATT or ATN)

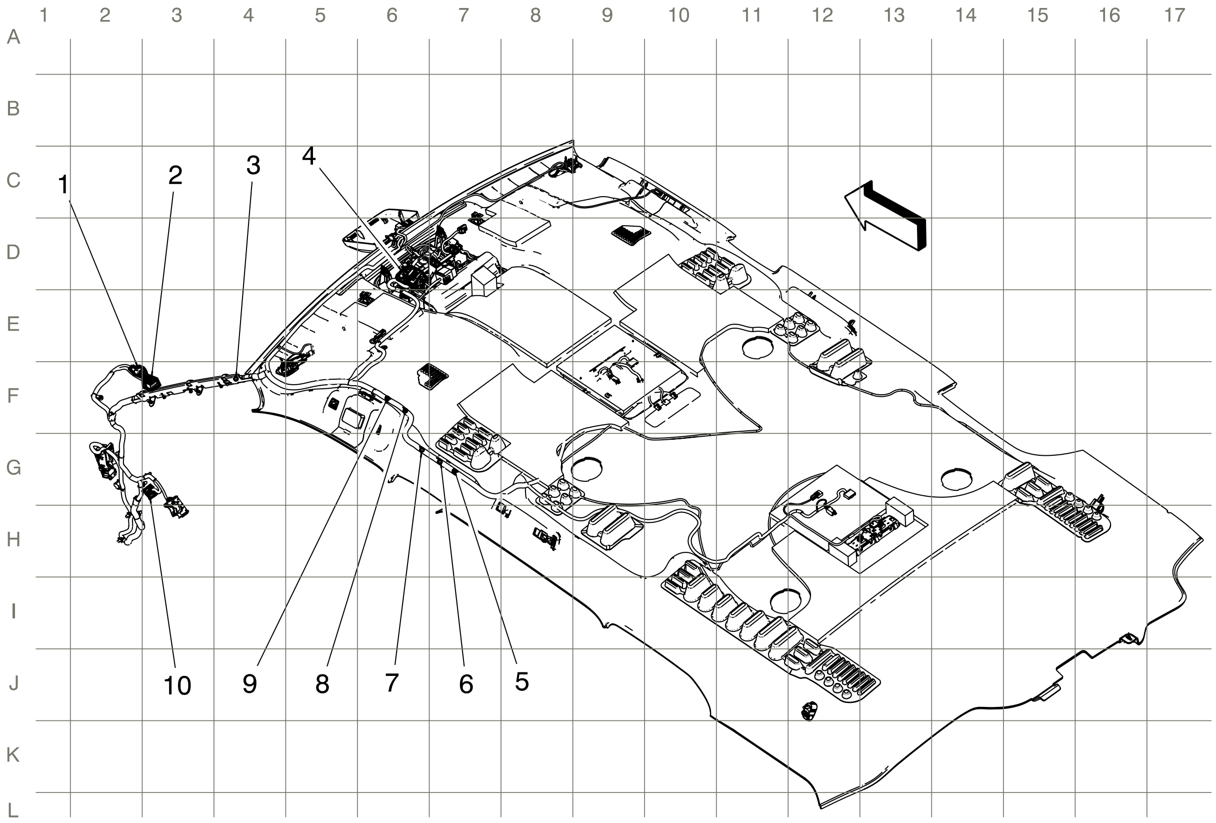
Liftgate Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5

Items

1. J901
2. X900
3. J902
4. J903 (TB5 or TC2)
5. J904

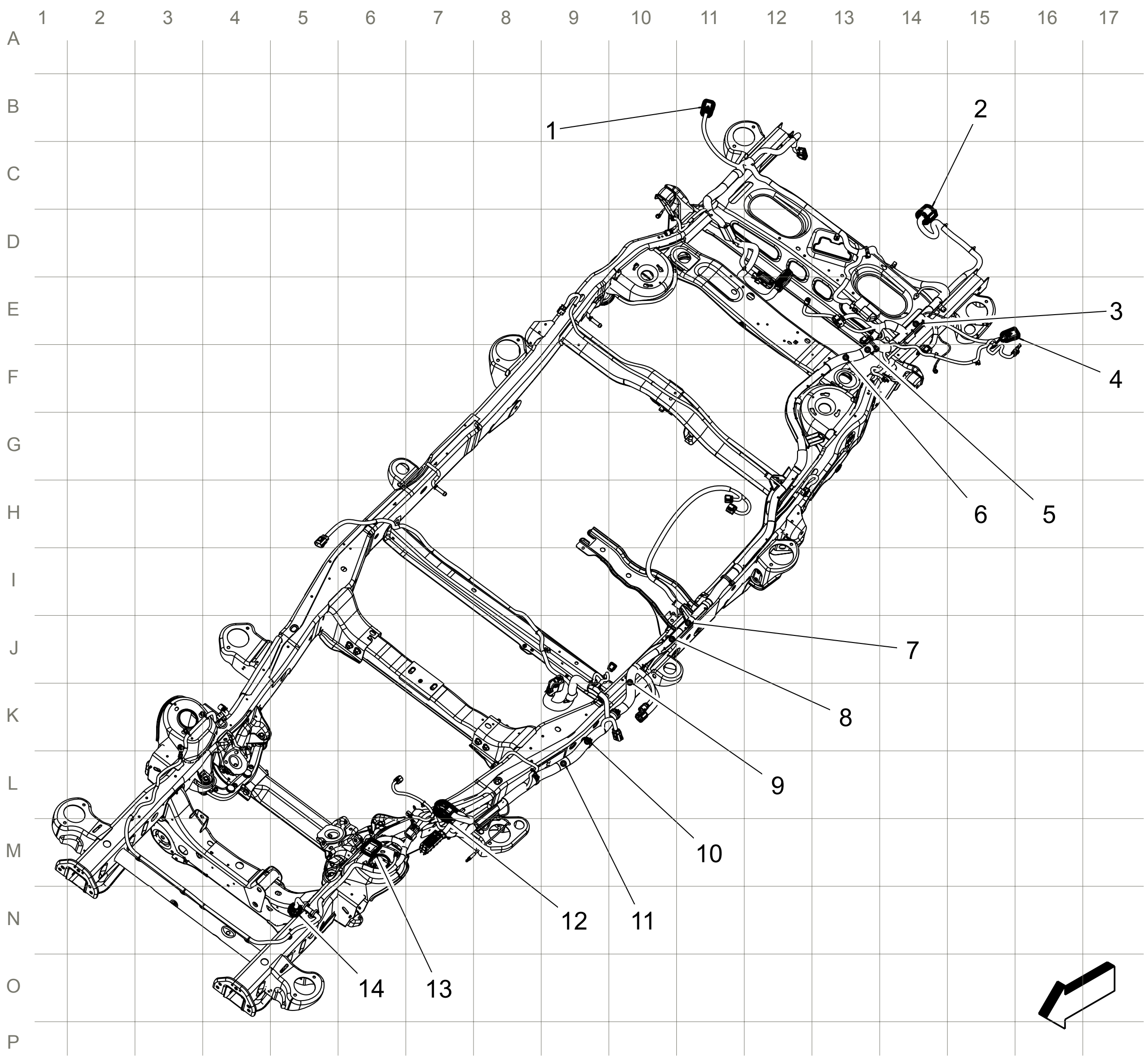
Headliner Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
10
9
8
7
6
5

Items

1. X204 (U42)
2. X203
3. J319 (DNU or U42)
4. X316
5. J332
6. J312
7. J320 (AZ3)
8. J313
9. J311
10. X315 (NKC, UGN or UTT)

Chassis Harness Routing


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
1
2
3
4
5
6
7
8
9
10
11
12
13
14

Items

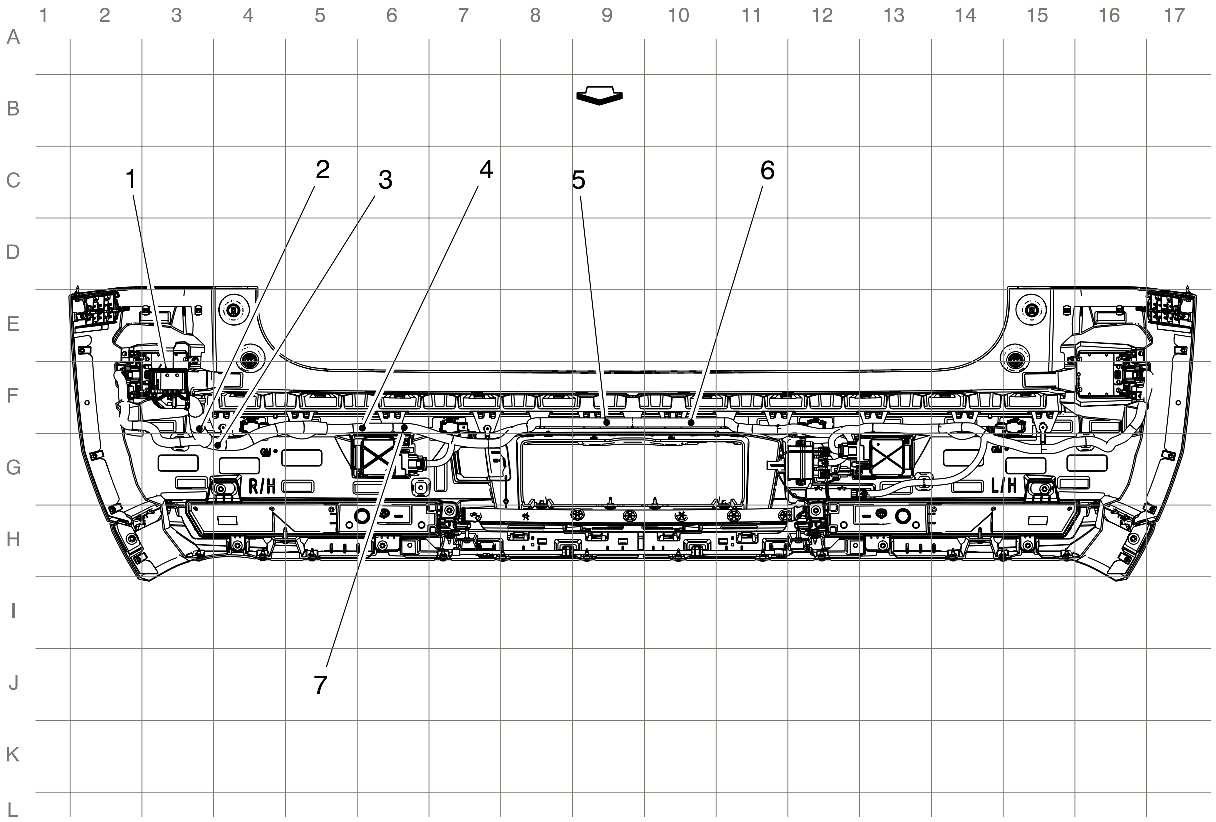
1. X420
2. X88 Trailer Connector (without VQ9)
3. J453
4. X410
5. J451 (BRS, JL1, Z85 or Z95)
6. J449 (JL1 or Z85)
7. J375
8. J355
9. J356
10. J192 (BRS)
11. J191

12. X185

13. X125

14. X182

Rear Bumper Harness Routing (Z75)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
R/H
L/H

Items

1. X495

2. J499 (T79, UKC or UGN with Z75)

3. J490 (UD5 or UD7)

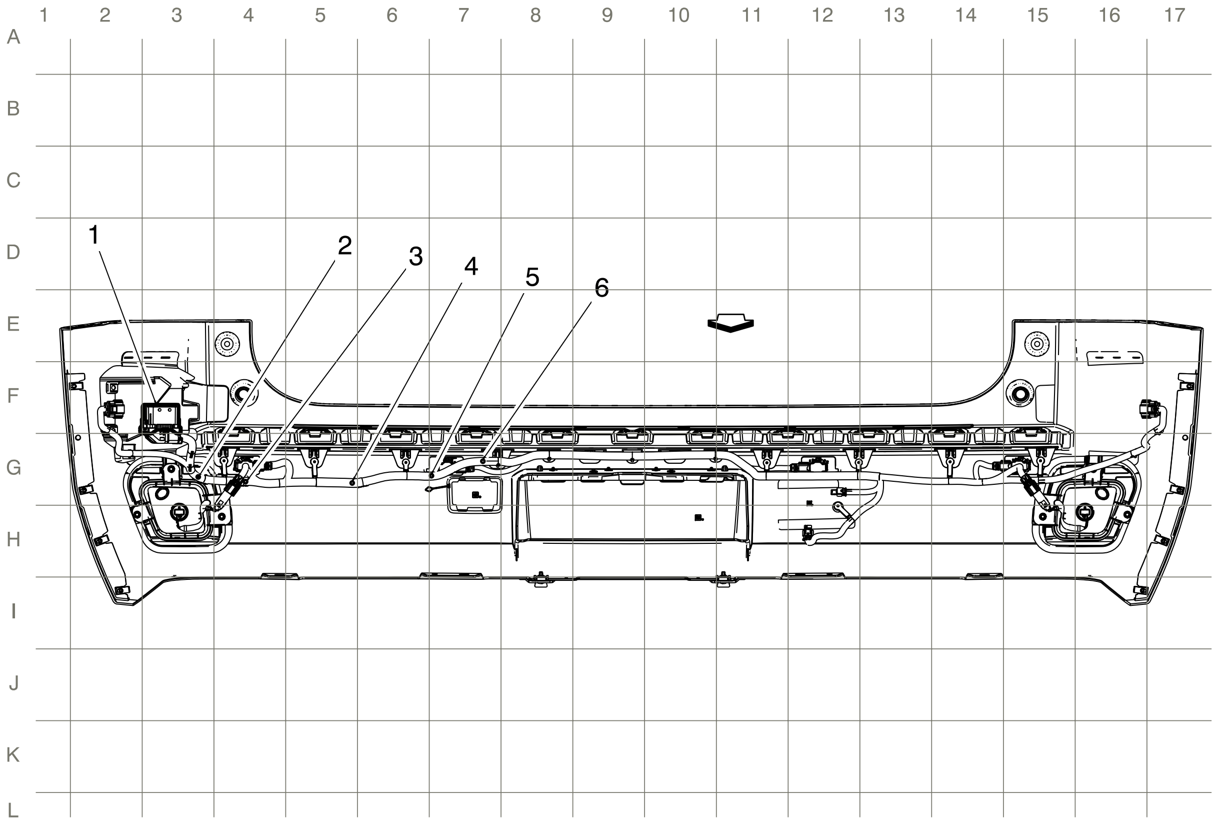
4. J494 (Z75 with UGN)

5. J495 (UD5 or UD7)

6. J498 (UKC)

7. J493 (T79)

Rear Bumper Harness Routing (X88 or Z88)

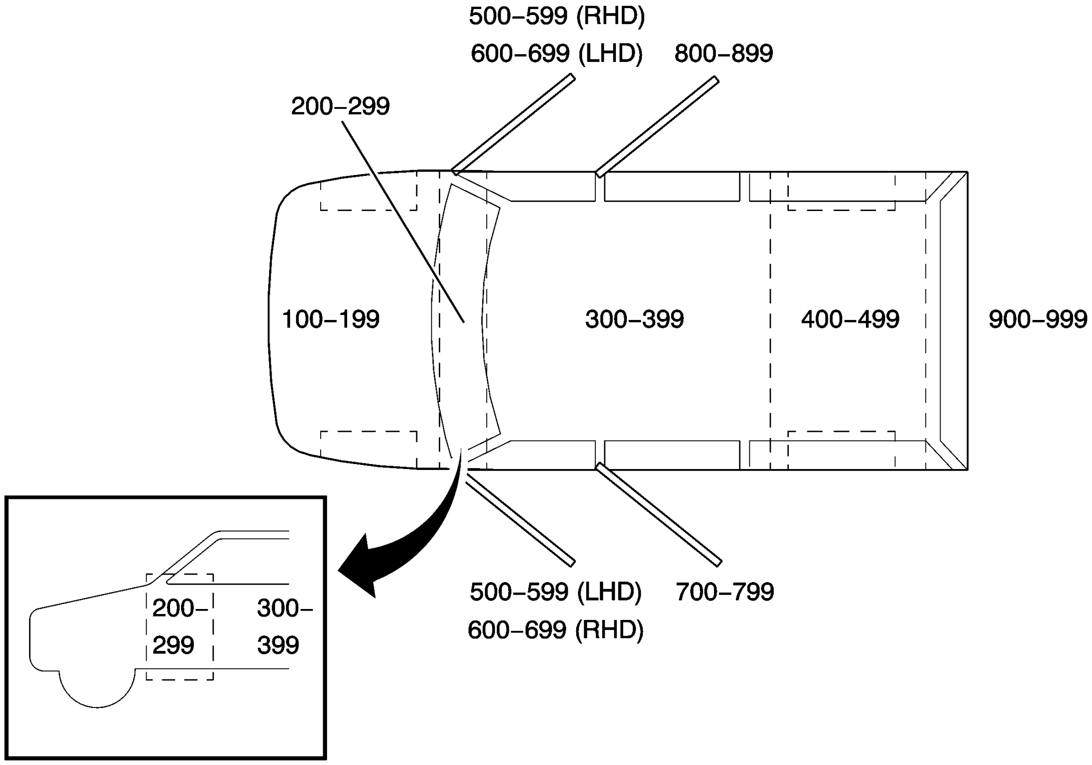

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6

Items

1. X495
2. J490 (UD5 or UD7)
3. J495 (UD5 or UD7)
4. J499 (T79, UKC or UGN with Z75)
5. J493 (T79)
6. J498 (UKC)

Vehicle Zoning Strategy

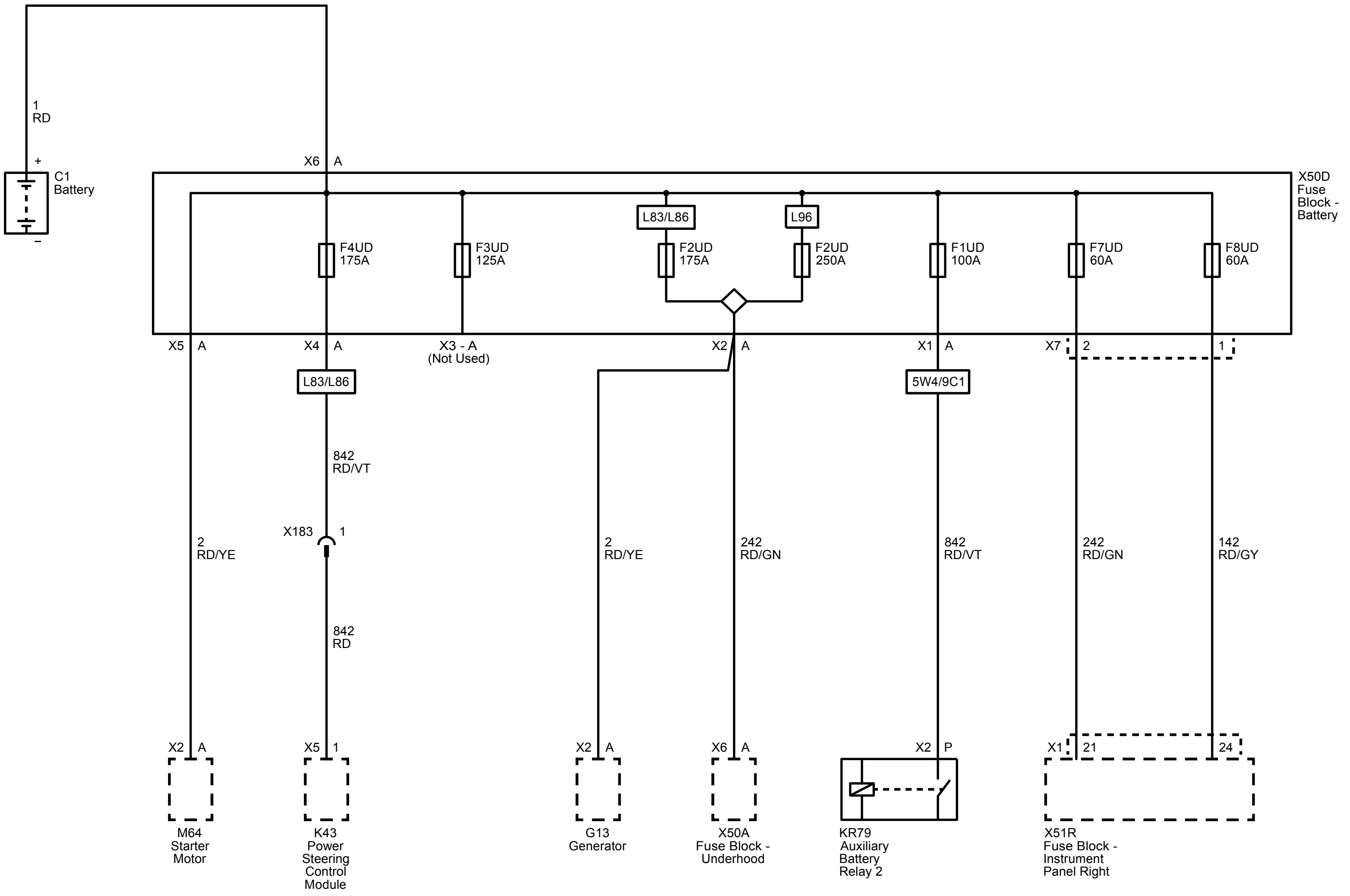
All grounds, in-line connectors, and splices have identifying numbers that correspond to where they are located in the vehicle. The following table explains the numbering system.



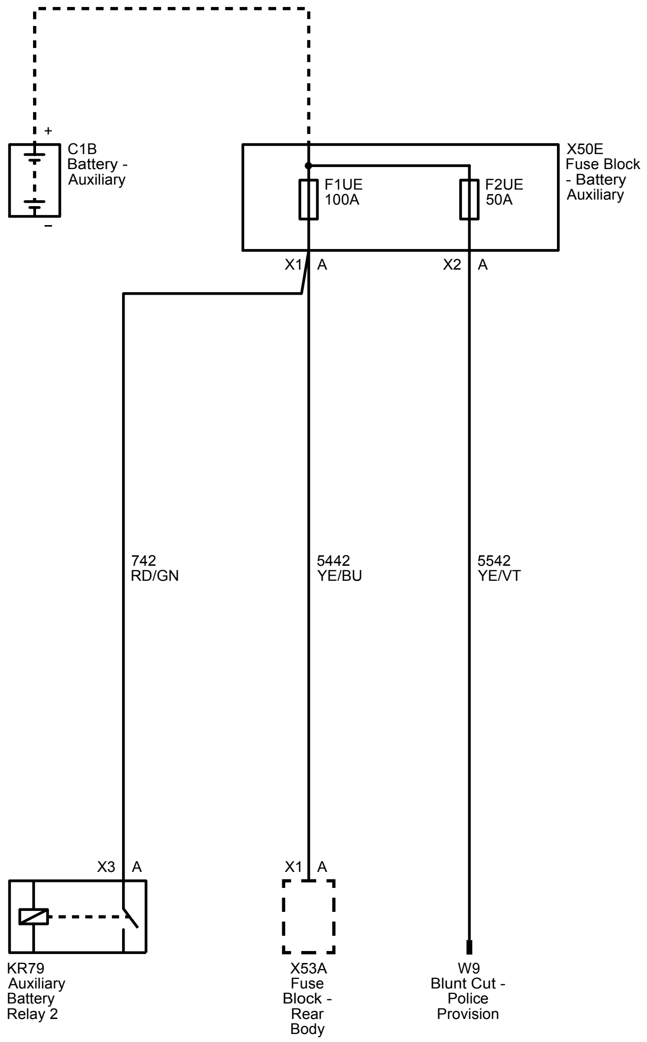
Vehicle Zoning Strategy

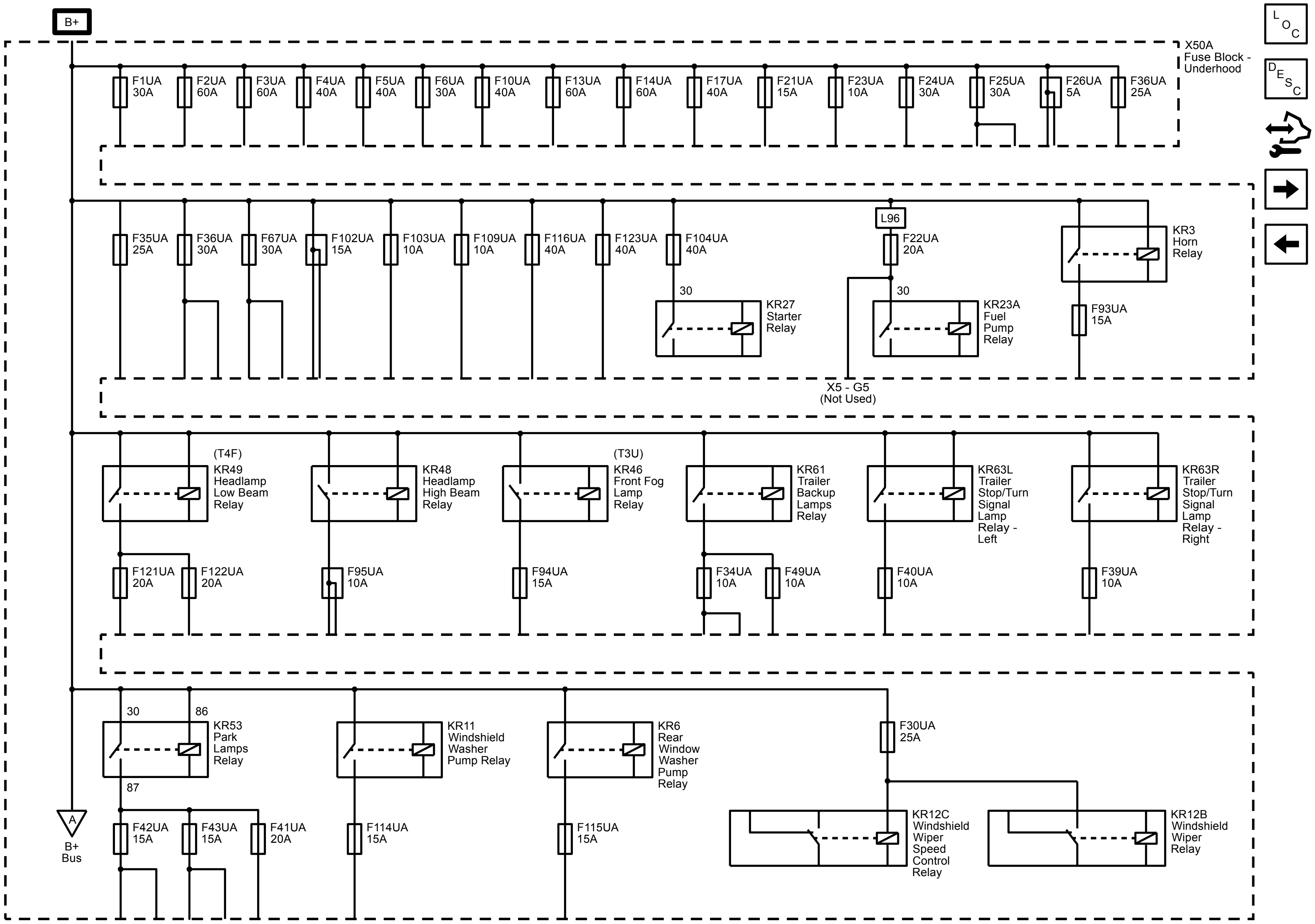
Callout Numbers	Zone Description
100-199	Engine compartment (all forward of the instrument panel)
200-299	Within the instrument panel area (between the bulkhead and the front plane of the instrument panel)
300-399	Passenger compartment (from instrument panel to the back of the 2nd row seats)
400-499	Luggage compartment (from the back of the 2nd row seats to the rear of the vehicle, including any additional rows of seating rear of the 2nd row seats)
500-599	Inline harness connectors to or within the driver door
600-699	Inline harness connectors to or within the front passenger door
700-799	Inline harness connectors to or within the left rear door
800-899	Inline harness connectors to or within the right rear door
900-999	Inline harness connectors to or within the liftgate, lift window, endgate, or rear doors

X50D Fuse Block - Battery

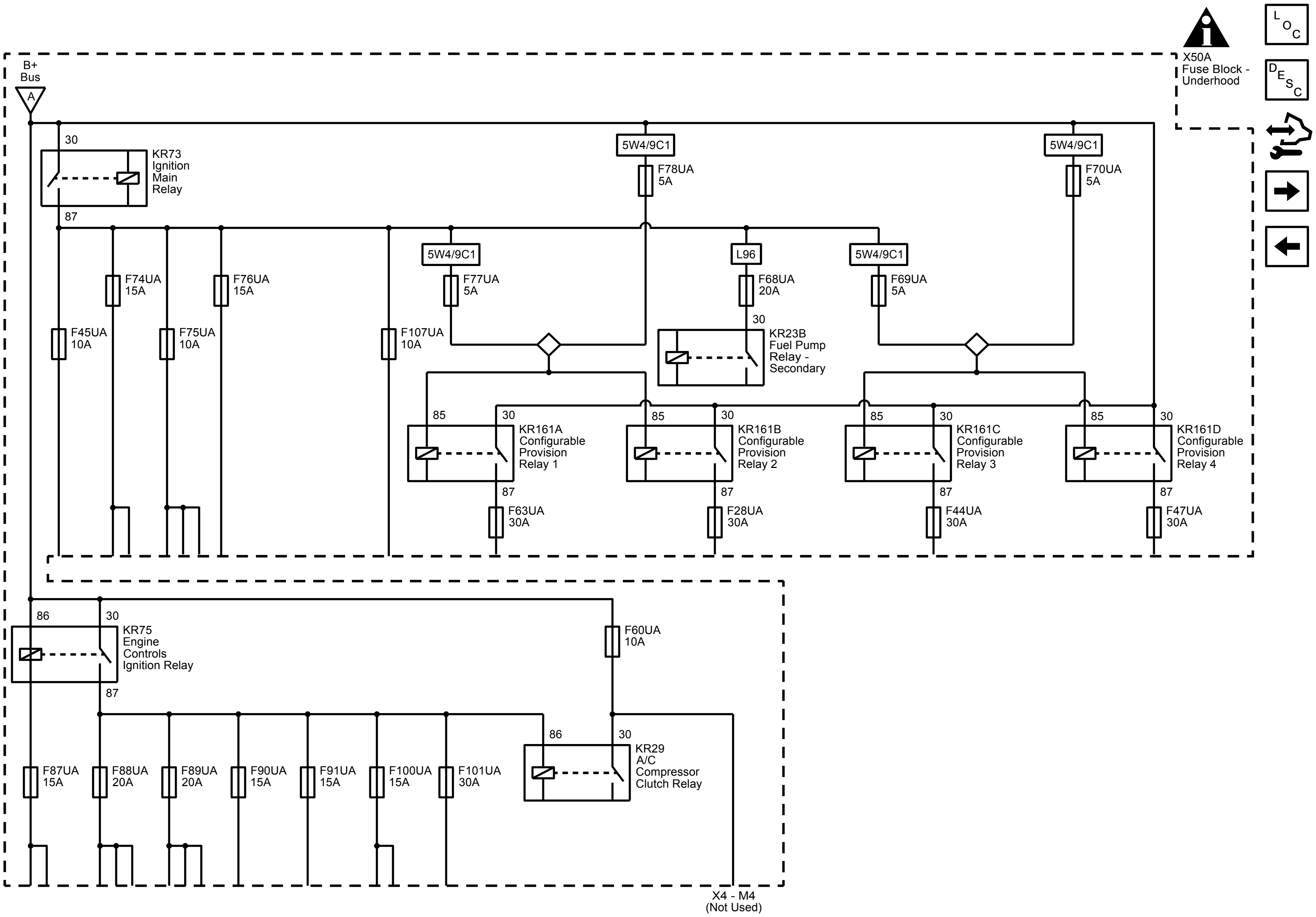

1
RD
+
C1
Battery
–
X6
A
X50D
Fuse
Block -
Battery
L83/L86
L96
F4UD
175A
F3UD
125A
F2UD
175A
F2UD
250A
F1UD
100A
F7UD
60A
F8UD
60A
X5
A
X4
A
X3 - A
(Not Used)
X2
A
X1
A
X7
2
1
L83/L86
5W4/9C1
842
RD/VT
X183
1
842
RD
2
RD/YE
2
RD/YE
242
RD/GN
842
RD/VT
242
RD/GN
142
RD/GY
X2
A
X5
1
X2
A
X6
A
X2
P
X1
21
24
M64
Starter
Motor
K43
Power
Steering
Control
Module
G13
Generator
X50A
Fuse Block -
Underhood
KR79
Auxiliary
Battery
Relay 2
X51R
Fuse Block -
Instrument
Panel Right

X50E Fuse Block - Battery Auxiliary (5W4 or 9C1)


+
C1B
Battery -
Auxiliary
–
X50E
Fuse Block
- Battery
Auxiliary
F1UE
100A
F2UE
50A
X1
A
X2
A
742
RD/GN
5442
YE/BU
5542
YE/VT
X3
A
X1
A
KR79
Auxiliary
Battery
Relay 2
X53A
Fuse
Block -
Rear
Body
W9
Blunt Cut -
Police
Provision

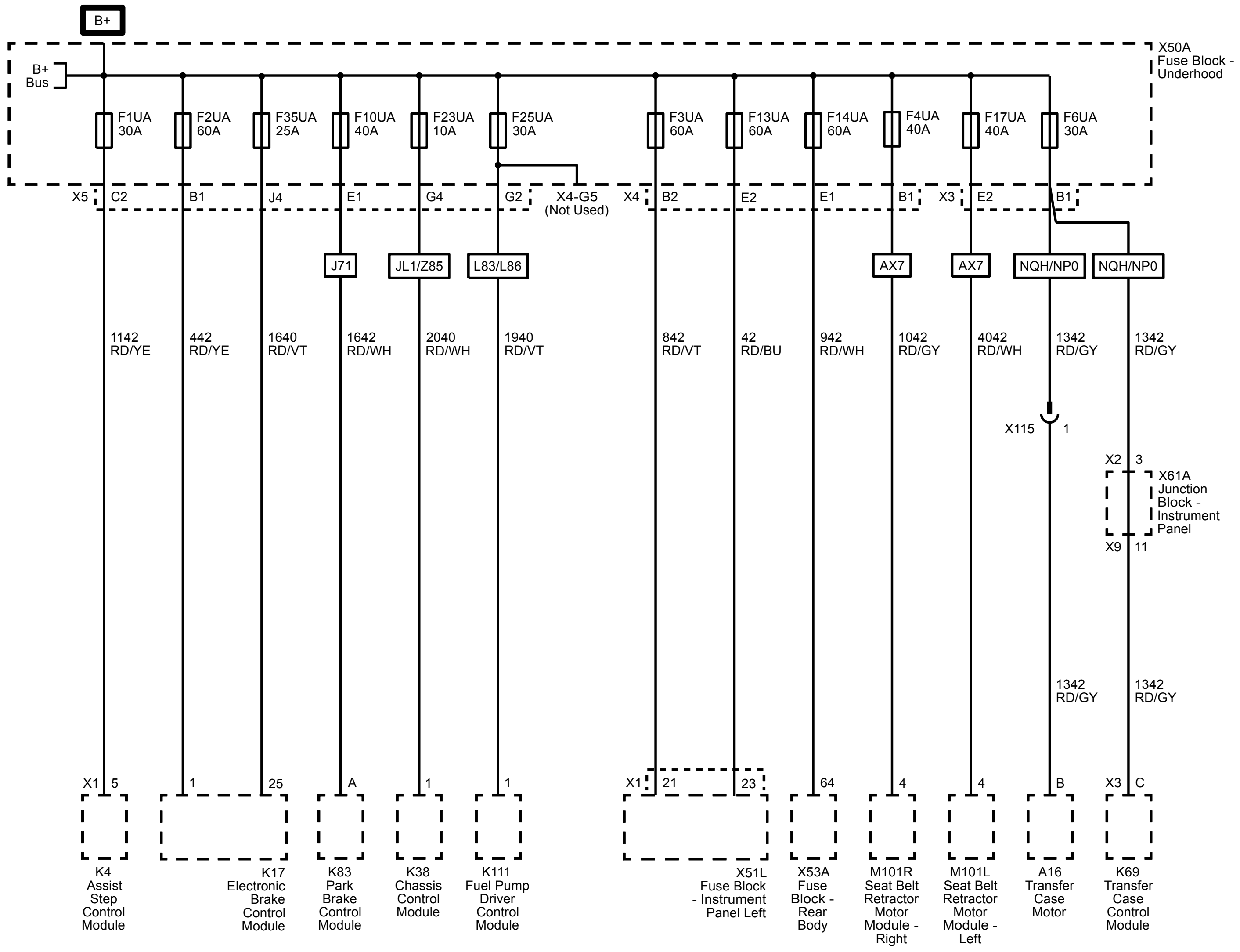

B+
X50A
Fuse Block -
Underhood
F1UA 30A
F2UA 60A
F3UA 60A
F4UA 40A
F5UA 40A
F6UA 30A
F10UA 40A
F13UA 60A
F14UA 60A
F17UA 40A
F21UA 15A
F23UA 10A
F24UA 30A
F25UA 30A
F26UA 5A
F36UA 25A
F35UA 25A
F36UA 30A
F67UA 30A
F102UA 15A
F103UA 10A
F109UA 10A
F116UA 40A
F123UA 40A
F104UA 40A
L96
F22UA 20A
KR3 Horn Relay
30
KR27 Starter Relay
30
KR23A Fuel Pump Relay
F93UA 15A
X5 - G5 (Not Used)
(T4F)
KR49 Headlamp Low Beam Relay
KR48 Headlamp High Beam Relay
(T3U)
KR46 Front Fog Lamp Relay
KR61 Trailer Backup Lamps Relay
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
F121UA 20A
F122UA 20A
F95UA 10A
F94UA 15A
F34UA 10A
F49UA 10A
F40UA 10A
F39UA 10A
30
86
KR53 Park Lamps Relay
87
KR11 Windshield Washer Pump Relay
KR6 Rear Window Washer Pump Relay
F30UA 25A
KR12C Windshield Wiper Speed Control Relay
KR12B Windshield Wiper Relay
A
B+ Bus
F42UA 15A
F43UA 15A
F41UA 20A
F114UA 15A
F115UA 15A

B+ Bus X50A Fuse Block - Underhood (2 of 2)

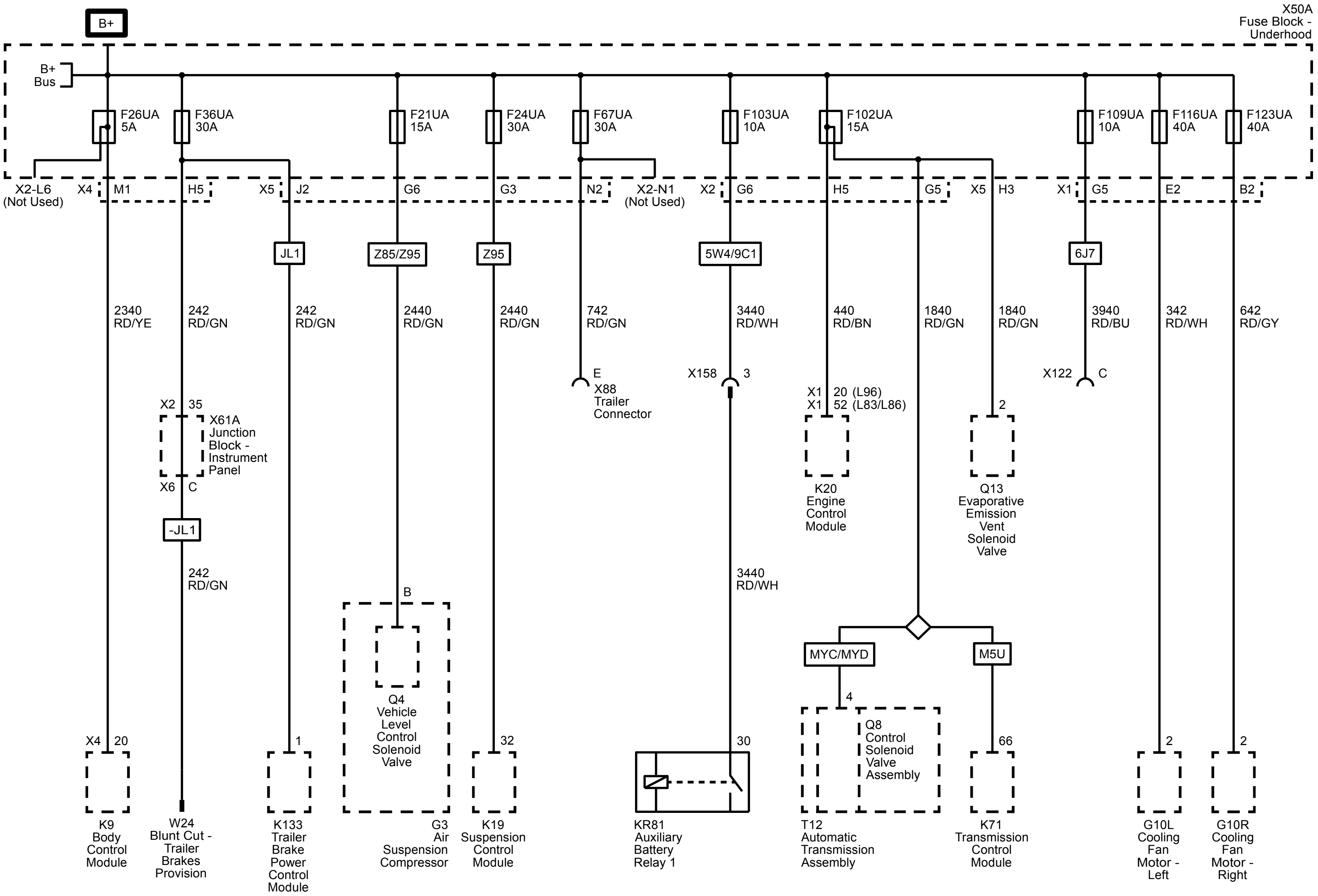

X50A
Fuse Block -
Underhood
L O C
D E S C
B+
Bus
A
30
KR73
Ignition
Main
Relay
87
5W4/9C1
F78UA
5A
5W4/9C1
F70UA
5A
F74UA
15A
F76UA
15A
F45UA
10A
F75UA
10A
F107UA
10A
5W4/9C1
F77UA
5A
L96
F68UA
20A
30
KR23B
Fuel Pump
Relay -
Secondary
5W4/9C1
F69UA
5A
85
30
KR161A
Configurable
Provision
Relay 1
87
F63UA
30A
85
30
KR161B
Configurable
Provision
Relay 2
87
F28UA
30A
85
30
KR161C
Configurable
Provision
Relay 3
87
F44UA
30A
85
30
KR161D
Configurable
Provision
Relay 4
87
F47UA
30A
86
30
KR75
Engine
Controls
Ignition Relay
87
F60UA
10A
86
30
KR29
A/C
Compressor
Clutch Relay
F87UA
15A
F88UA
20A
F89UA
20A
F90UA
15A
F91UA
15A
F100UA
15A
F101UA
30A
X4 - M4
(Not Used)

2017 FULL SIZE SUV (C/K) ELECTRICAL SECTION

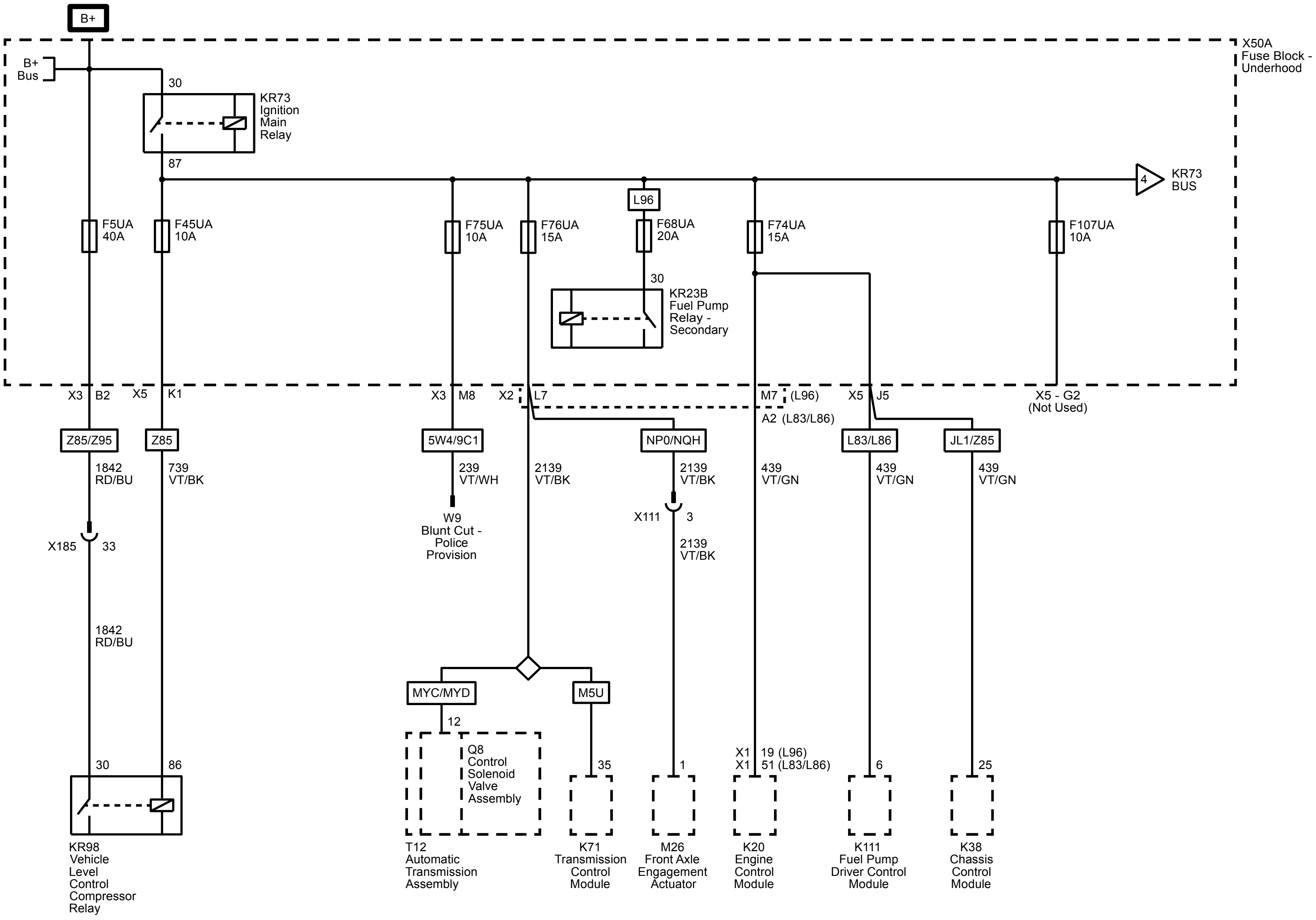
F1UA, F2UA, F3UA, F4UA, F6UA, F10UA, F13UA, F14UA, F17UA, F23UA, F25UA, and F35UA


B+
B+ Bus
X50A Fuse Block - Underhood
F1UA 30A
F2UA 60A
F35UA 25A
F10UA 40A
F23UA 10A
F25UA 30A
F3UA 60A
F13UA 60A
F14UA 60A
F4UA 40A
F17UA 40A
F6UA 30A
X5
C2
B1
J4
E1
G4
G2
X4-G5 (Not Used)
X4
B2
E2
E1
B1
X3
E2
B1
J71
JL1/Z85
L83/L86
AX7
AX7
NQH/NP0
NQH/NP0
1142 RD/YE
442 RD/YE
1640 RD/VT
1642 RD/WH
2040 RD/WH
1940 RD/VT
842 RD/VT
42 RD/BU
942 RD/WH
1042 RD/GY
4042 RD/WH
1342 RD/GY
1342 RD/GY
X115
1
X2
3
X61A Junction Block - Instrument Panel
X9
11
1342 RD/GY
1342 RD/GY
X1
5
1
25
A
1
1
X1
21
23
64
4
4
B
X3
C
K4 Assist Step Control Module
K17 Electronic Brake Control Module
K83 Park Brake Control Module
K38 Chassis Control Module
K111 Fuel Pump Driver Control Module
X51L Fuse Block - Instrument Panel Left
X53A Fuse Block - Rear Body
M101R Seat Belt Retractor Motor Module - Right
M101L Seat Belt Retractor Motor Module - Left
A16 Transfer Case Motor
K69 Transfer Case Control Module

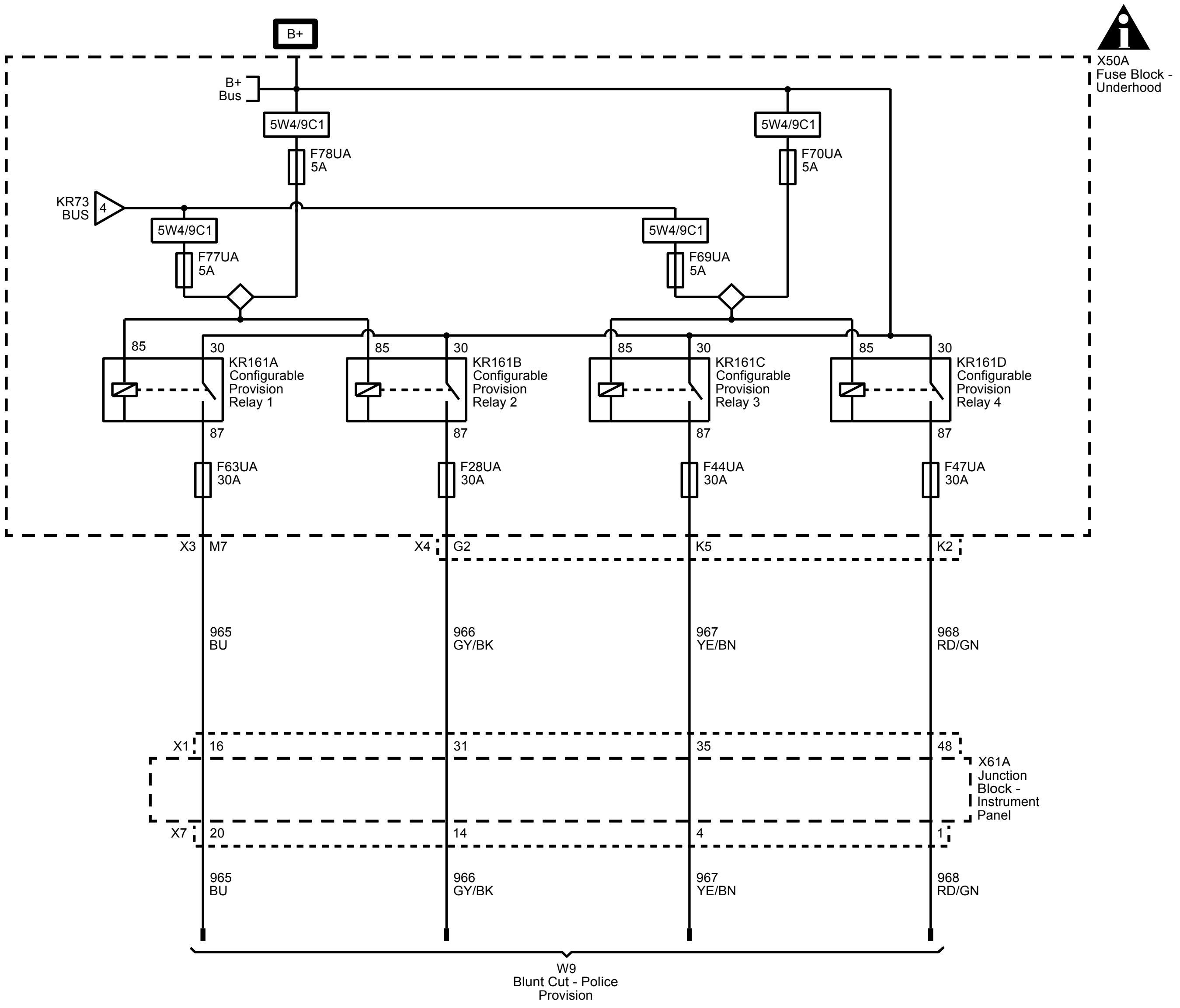
F21UA, F24UA, F26UA, F36UA, F67UA, F102UA, F103UA, F109UA, F116UA and F123UA


B+
X50A Fuse Block - Underhood
B+ Bus
F26UA 5A
F36UA 30A
F21UA 15A
F24UA 30A
F67UA 30A
F103UA 10A
F102UA 15A
F109UA 10A
F116UA 40A
F123UA 40A
X2-L6 (Not Used)
X4
M1
H5
X5
J2
G6
G3
N2
X2-N1 (Not Used)
X2
G6
H5
G5
X5
H3
X1
G5
E2
B2
JL1
Z85/Z95
Z95
5W4/9C1
6J7
2340 RD/YE
242 RD/GN
242 RD/GN
2440 RD/GN
2440 RD/GN
742 RD/GN
3440 RD/WH
440 RD/BN
1840 RD/GN
1840 RD/GN
3940 RD/BU
342 RD/WH
642 RD/GY
E
X88 Trailer Connector
X158
3
X1 20 (L96)
X1 52 (L83/L86)
2
X122
C
X2 35
X61A Junction Block - Instrument Panel
X6 C
~JL1
242 RD/GN
K20 Engine Control Module
Q13 Evaporative Emission Vent Solenoid Valve
3440 RD/WH
B
MYC/MYD
M5U
4
Q4 Vehicle Level Control Solenoid Valve
Q8 Control Solenoid Valve Assembly
X4 20
1
32
30
66
2
2
K9 Body Control Module
W24 Blunt Cut - Trailer Brakes Provision
K133 Trailer Brake Power Control Module
G3 Air Suspension Compressor
K19 Suspension Control Module
KR81 Auxiliary Battery Relay 1
T12 Automatic Transmission Assembly
K71 Transmission Control Module
G10L Cooling Fan Motor - Left
G10R Cooling Fan Motor - Right

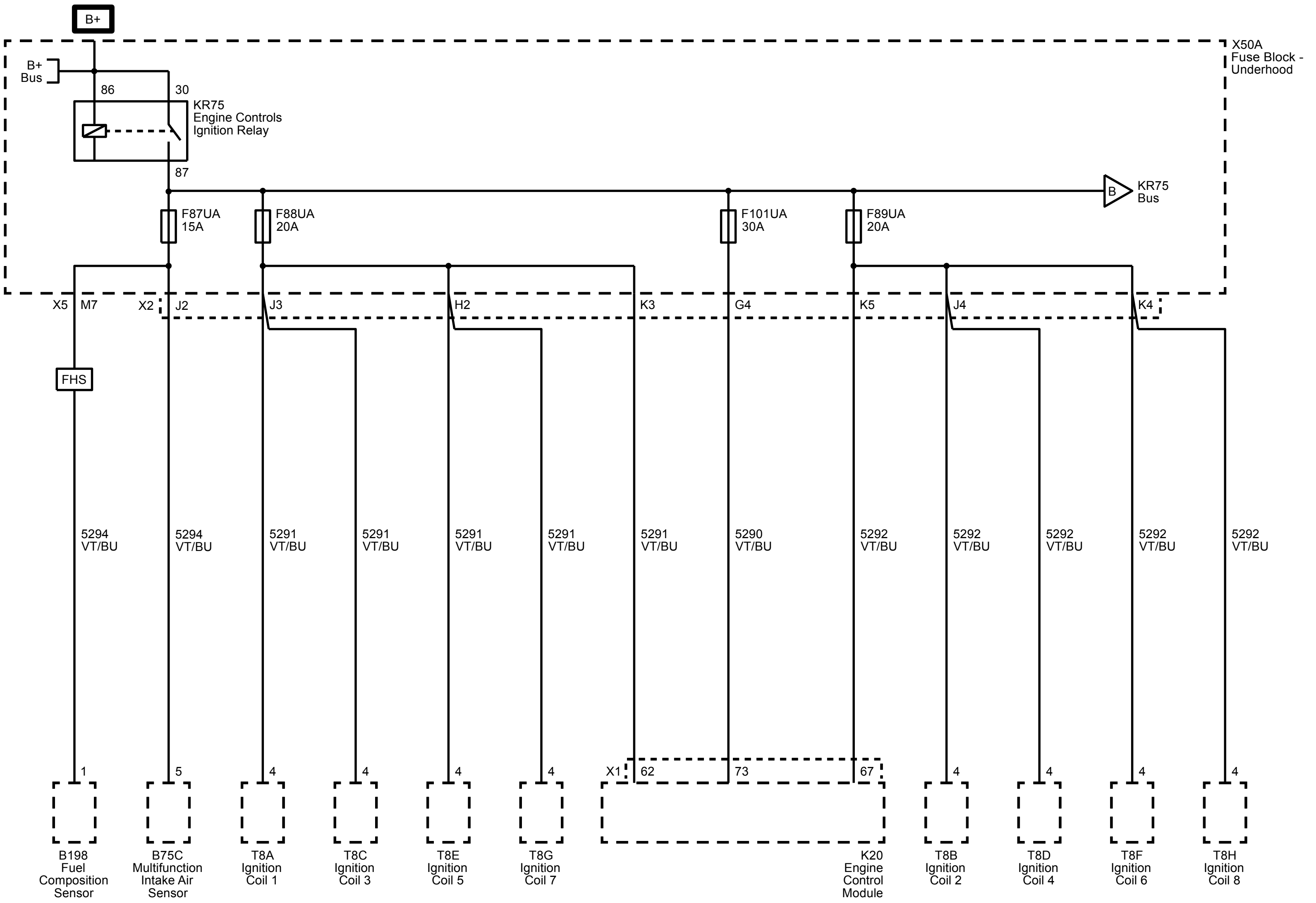
F5UA, F45UA, F68UA, F74UA, F75UA, F76UA and F107UA


B+
B+ Bus
30
KR73 Ignition Main Relay
87
X50A Fuse Block - Underhood
4
KR73 BUS
F5UA 40A
F45UA 10A
F75UA 10A
F76UA 15A
L96
F68UA 20A
F74UA 15A
F107UA 10A
30
KR23B Fuel Pump Relay - Secondary
X3 B2
X5 K1
X3 M8
X2 L7
M7 (L96)
A2 (L83/L86)
X5 J5
X5 - G2 (Not Used)
Z85/Z95
Z85
5W4/9C1
NP0/NQH
L83/L86
JL1/Z85
1842 RD/BU
739 VT/BK
239 VT/WH
2139 VT/BK
2139 VT/BK
439 VT/GN
439 VT/GN
439 VT/GN
W9 Blunt Cut - Police Provision
X111 3
2139 VT/BK
X185 33
1842 RD/BU
MYC/MYD
M5U
12
Q8 Control Solenoid Valve Assembly
35
1
X1 19 (L96)
X1 51 (L83/L86)
6
25
30
86
KR98 Vehicle Level Control Compressor Relay
T12 Automatic Transmission Assembly
K71 Transmission Control Module
M26 Front Axle Engagement Actuator
K20 Engine Control Module
K111 Fuel Pump Driver Control Module
K38 Chassis Control Module

F28UA, F44UA, F47UA, F63UA, F69UA, F70UA, F77UA and F78UA (5W4 or 9C1)


B+
B+ Bus
X50A Fuse Block - Underhood
5W4/9C1
F78UA 5A
5W4/9C1
F70UA 5A
KR73 BUS
4
5W4/9C1
F77UA 5A
5W4/9C1
F69UA 5A
85
30
KR161A Configurable Provision Relay 1
87
85
30
KR161B Configurable Provision Relay 2
87
85
30
KR161C Configurable Provision Relay 3
87
85
30
KR161D Configurable Provision Relay 4
87
F63UA 30A
F28UA 30A
F44UA 30A
F47UA 30A
X3
M7
X4
G2
K5
K2
965 BU
966 GY/BK
967 YE/BN
968 RD/GN
X1
16
31
35
48
X61A Junction Block - Instrument Panel
X7
20
14
4
1
965 BU
966 GY/BK
967 YE/BN
968 RD/GN
W9 Blunt Cut - Police Provision

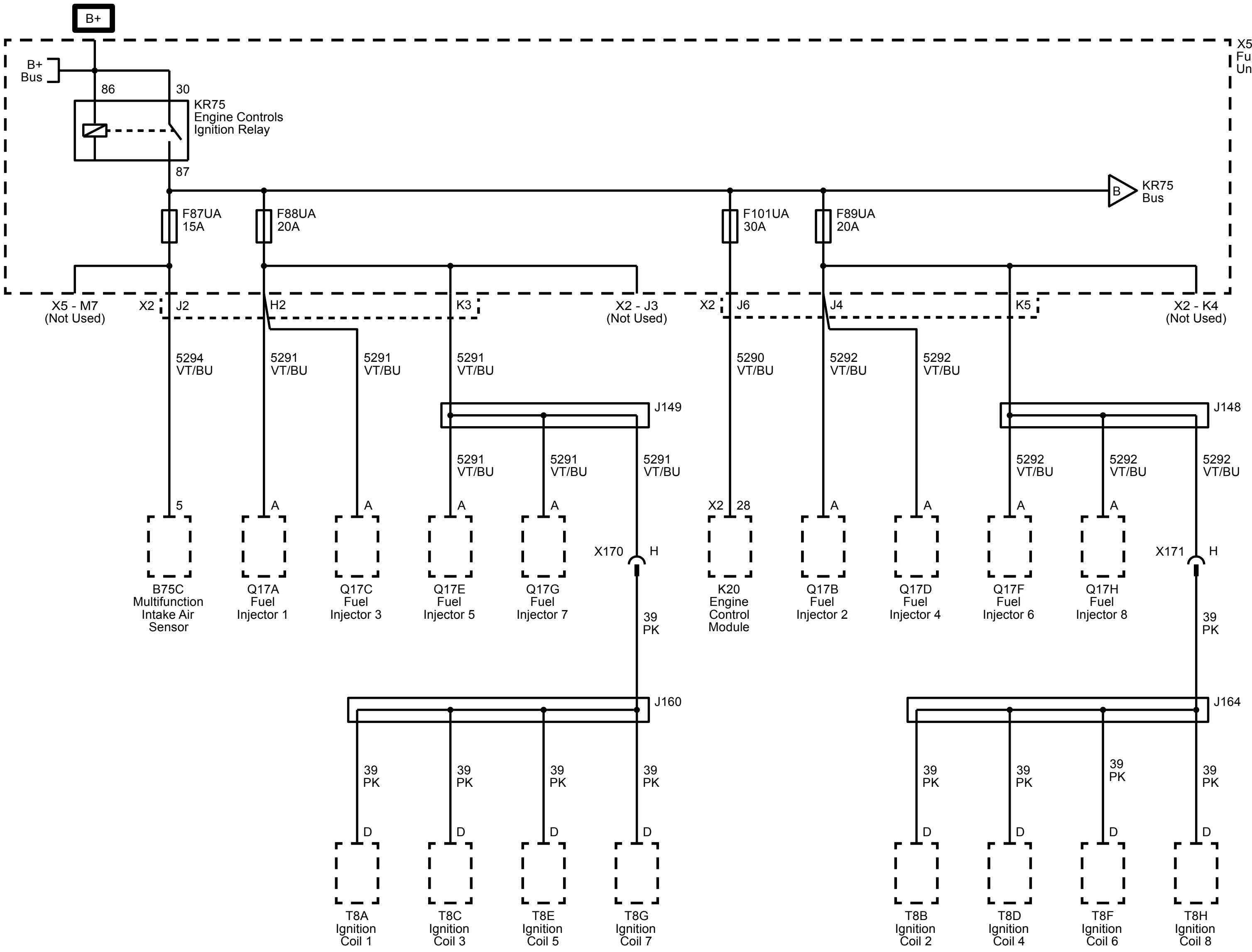
F87UA, F88UA, F89UA and F101UA (L83 or L86)

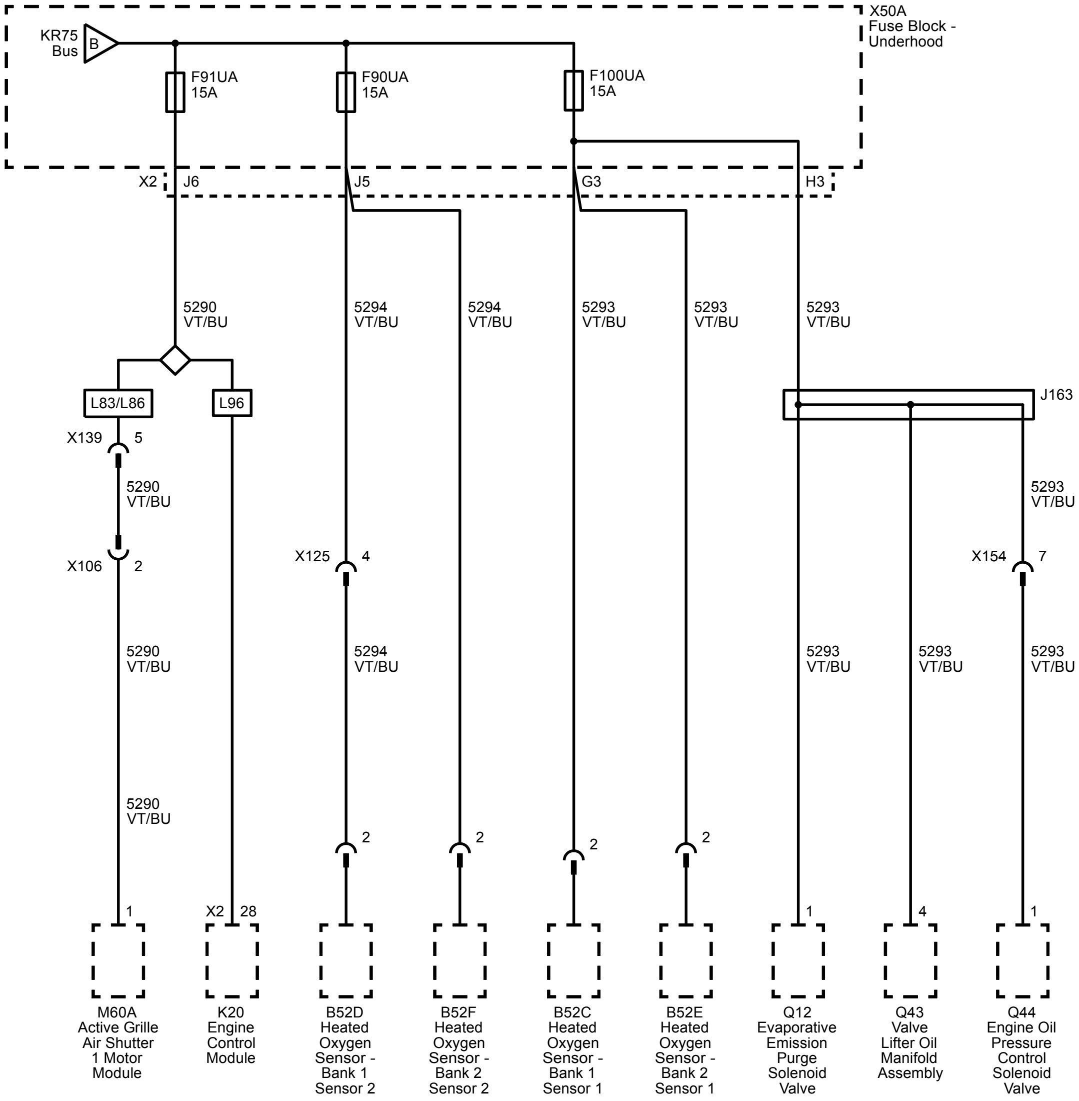


B+
B+ Bus
86
30
KR75 Engine Controls Ignition Relay
87
X50A Fuse Block - Underhood
B
KR75 Bus
F87UA 15A
F88UA 20A
F101UA 30A
F89UA 20A
X5
M7
X2
J2
J3
H2
K3
G4
K5
J4
K4
FHS
5294 VT/BU
5294 VT/BU
5291 VT/BU
5291 VT/BU
5291 VT/BU
5291 VT/BU
5291 VT/BU
5290 VT/BU
5292 VT/BU
5292 VT/BU
5292 VT/BU
5292 VT/BU
5292 VT/BU
1
5
4
4
4
4
X1
62
73
67
4
4
4
4
B198 Fuel Composition Sensor
B75C Multifunction Intake Air Sensor
T8A Ignition Coil 1
T8C Ignition Coil 3
T8E Ignition Coil 5
T8G Ignition Coil 7
K20 Engine Control Module
T8B Ignition Coil 2
T8D Ignition Coil 4
T8F Ignition Coil 6
T8H Ignition Coil 8

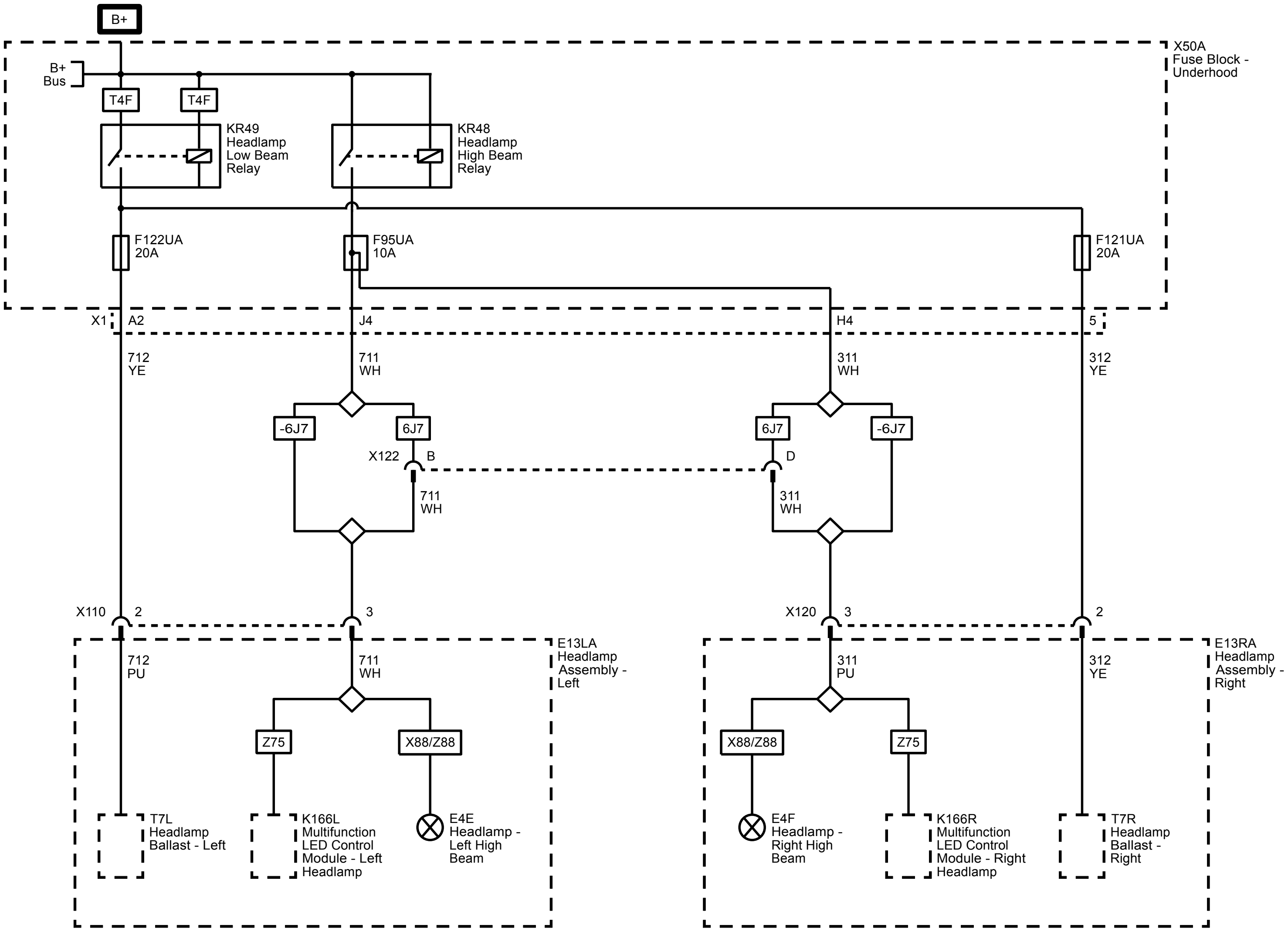
LOC
DESC

F87UA, F88UA, F89UA and F101UA (L96)

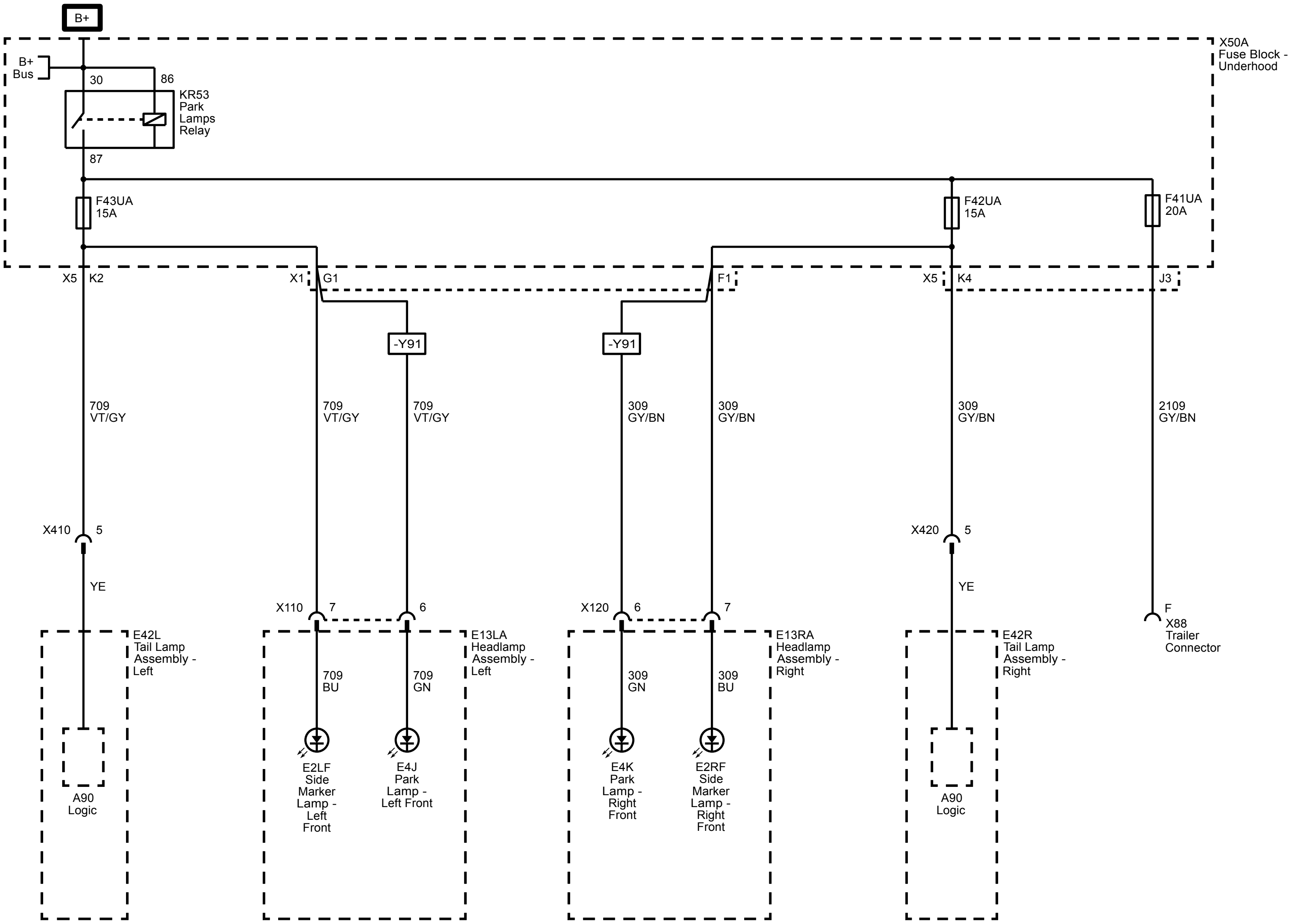

B+
B+ Bus
86
30
KR75 Engine Controls Ignition Relay
87
X50A Fuse Block - Underhood
B
KR75 Bus
F87UA 15A
F88UA 20A
F101UA 30A
F89UA 20A
X5 - M7 (Not Used)
X2
J2
H2
K3
X2 - J3 (Not Used)
X2
J6
J4
K5
X2 - K4 (Not Used)
5294 VT/BU
5291 VT/BU
5291 VT/BU
5291 VT/BU
5290 VT/BU
5292 VT/BU
5292 VT/BU
J149
J148
5291 VT/BU
5291 VT/BU
5291 VT/BU
5292 VT/BU
5292 VT/BU
5292 VT/BU
5
A
A
A
A
X2 28
A
A
A
A
X170
H
X171
H
B75C Multifunction Intake Air Sensor
Q17A Fuel Injector 1
Q17C Fuel Injector 3
Q17E Fuel Injector 5
Q17G Fuel Injector 7
K20 Engine Control Module
Q17B Fuel Injector 2
Q17D Fuel Injector 4
Q17F Fuel Injector 6
Q17H Fuel Injector 8
39 PK
39 PK
J160
J164
39 PK
39 PK
39 PK
39 PK
39 PK
39 PK
39 PK
39 PK
D
D
D
D
D
D
D
D
T8A Ignition Coil 1
T8C Ignition Coil 3
T8E Ignition Coil 5
T8G Ignition Coil 7
T8B Ignition Coil 2
T8D Ignition Coil 4
T8F Ignition Coil 6
T8H Ignition Coil 8


X50A
Fuse Block -
Underhood
KR75
Bus
B
F91UA
15A
F90UA
15A
F100UA
15A
X2
J6
J5
G3
H3
5290
VT/BU
5294
VT/BU
5294
VT/BU
5293
VT/BU
5293
VT/BU
5293
VT/BU
L83/L86
L96
J163
X139
5
5290
VT/BU
5293
VT/BU
X106
2
X125
4
X154
7
5290
VT/BU
5294
VT/BU
5293
VT/BU
5293
VT/BU
5293
VT/BU
5290
VT/BU
2
2
2
2
1
X2
28
1
4
1
M60A
Active Grille
Air Shutter
1 Motor
Module
K20
Engine
Control
Module
B52D
Heated
Oxygen
Sensor -
Bank 1
Sensor 2
B52F
Heated
Oxygen
Sensor -
Bank 2
Sensor 2
B52C
Heated
Oxygen
Sensor -
Bank 1
Sensor 1
B52E
Heated
Oxygen
Sensor -
Bank 2
Sensor 1
Q12
Evaporative
Emission
Purge
Solenoid
Valve
Q43
Valve
Lifter Oil
Manifold
Assembly
Q44
Engine Oil
Pressure
Control
Solenoid
Valve

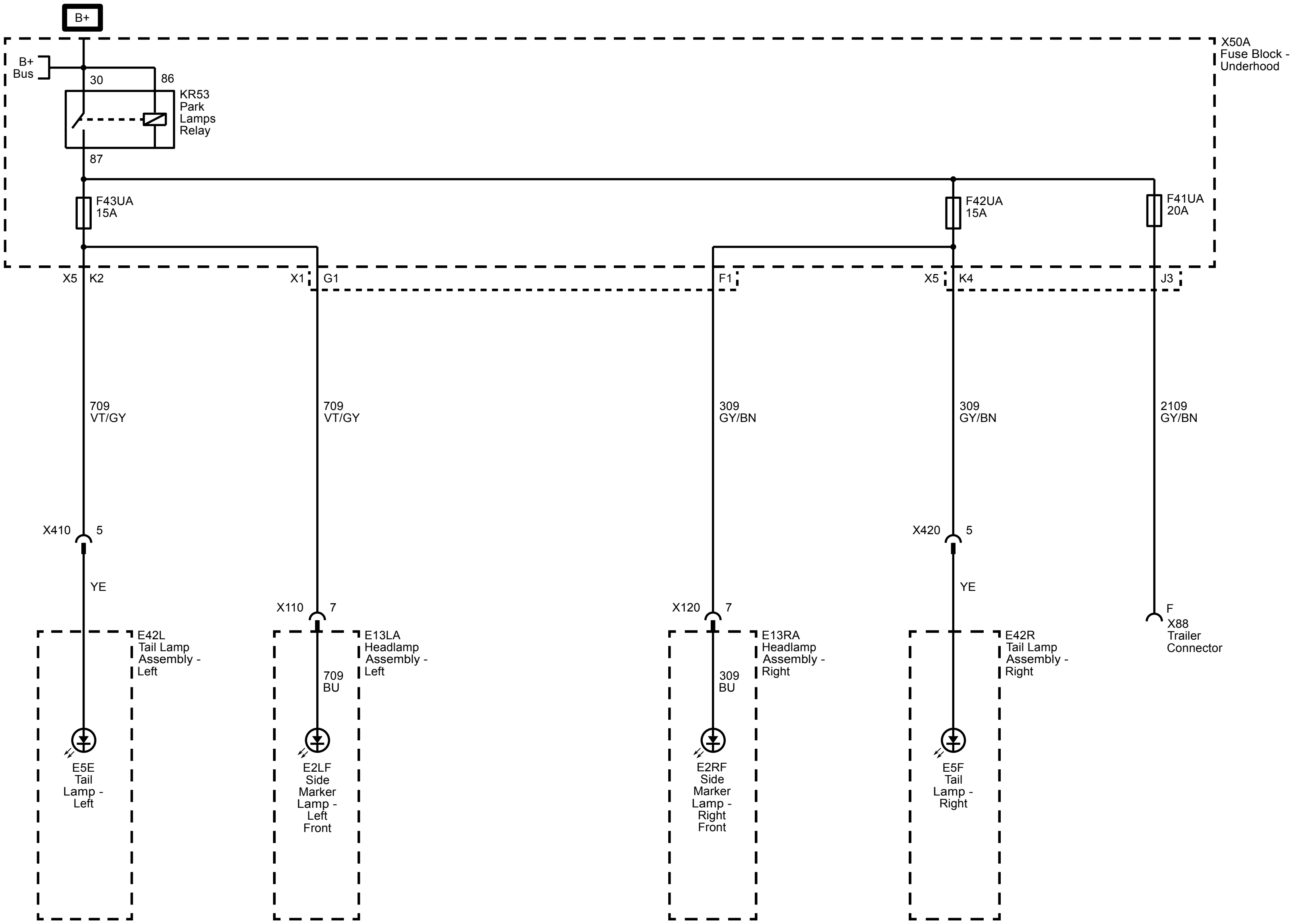
F95UA, F121UA and F122UA


B+
B+ Bus
X50A Fuse Block - Underhood
T4F
T4F
KR49 Headlamp Low Beam Relay
KR48 Headlamp High Beam Relay
F122UA 20A
F95UA 10A
F121UA 20A
X1
A2
J4
H4
5
712 YE
711 WH
311 WH
312 YE
-6J7
6J7
6J7
-6J7
X122
B
D
711 WH
311 WH
X110
2
3
X120
3
2
E13LA Headlamp Assembly - Left
712 PU
711 WH
Z75
X88/Z88
T7L Headlamp Ballast - Left
K166L Multifunction LED Control Module - Left Headlamp
E4E Headlamp - Left High Beam
E13RA Headlamp Assembly - Right
311 PU
312 YE
X88/Z88
Z75
E4F Headlamp - Right High Beam
K166R Multifunction LED Control Module - Right Headlamp
T7R Headlamp Ballast - Right

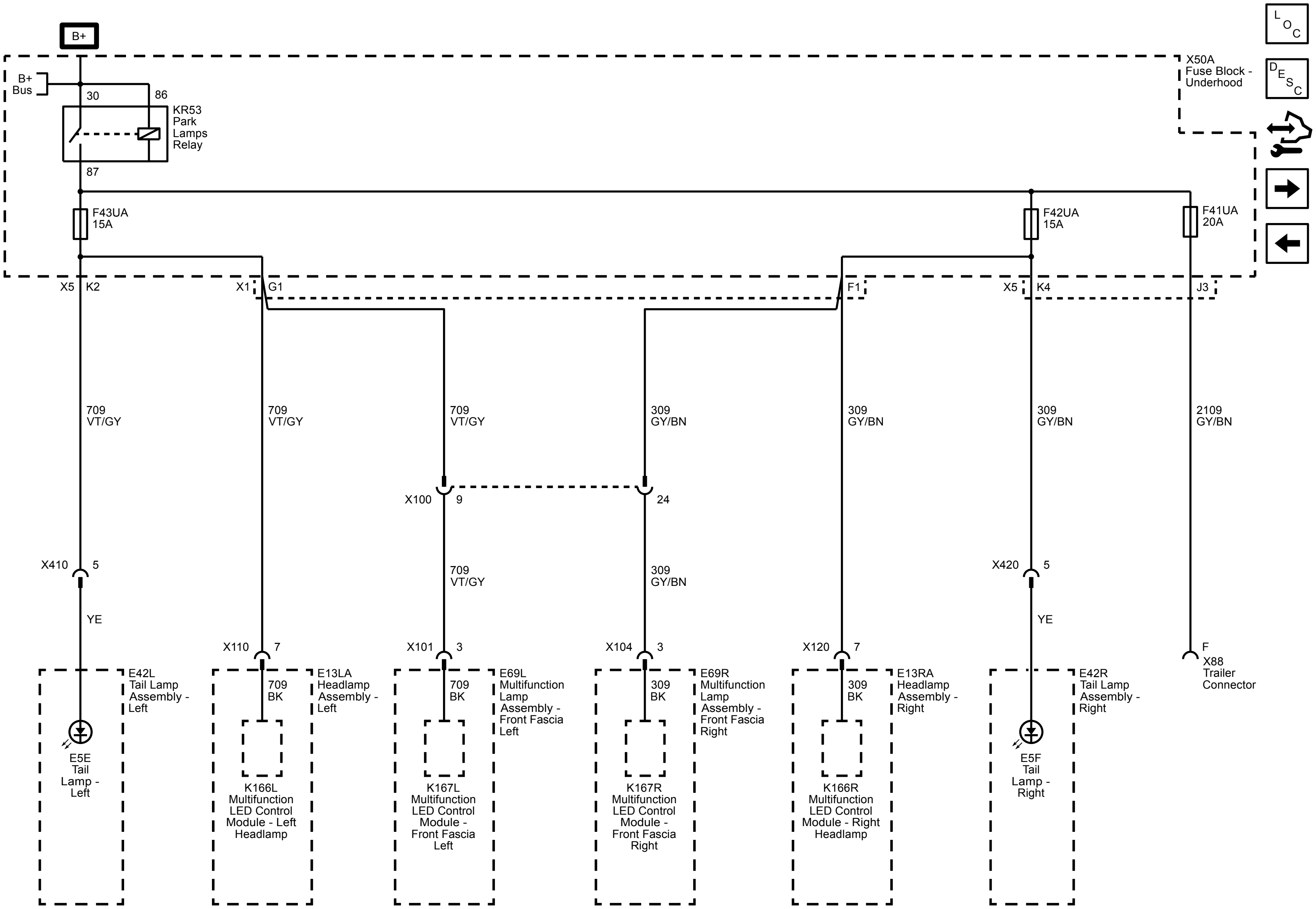
F41UA, F42UA and F43UA (X88)


B+
B+ Bus
30
86
KR53 Park Lamps Relay
87
X50A Fuse Block - Underhood
F43UA 15A
F42UA 15A
F41UA 20A
X5
K2
X1
G1
F1
X5
K4
J3
-Y91
-Y91
709 VT/GY
709 VT/GY
709 VT/GY
309 GY/BN
309 GY/BN
309 GY/BN
2109 GY/BN
X410
5
YE
X420
5
YE
X110
7
6
X120
6
7
F
X88 Trailer Connector
E42L Tail Lamp Assembly - Left
E13LA Headlamp Assembly - Left
E13RA Headlamp Assembly - Right
E42R Tail Lamp Assembly - Right
709 BU
709 GN
309 GN
309 BU
A90 Logic
E2LF Side Marker Lamp - Left Front
E4J Park Lamp - Left Front
E4K Park Lamp - Right Front
E2RF Side Marker Lamp - Right Front
A90 Logic

F41UA, F42UA and F43UA (Z88)

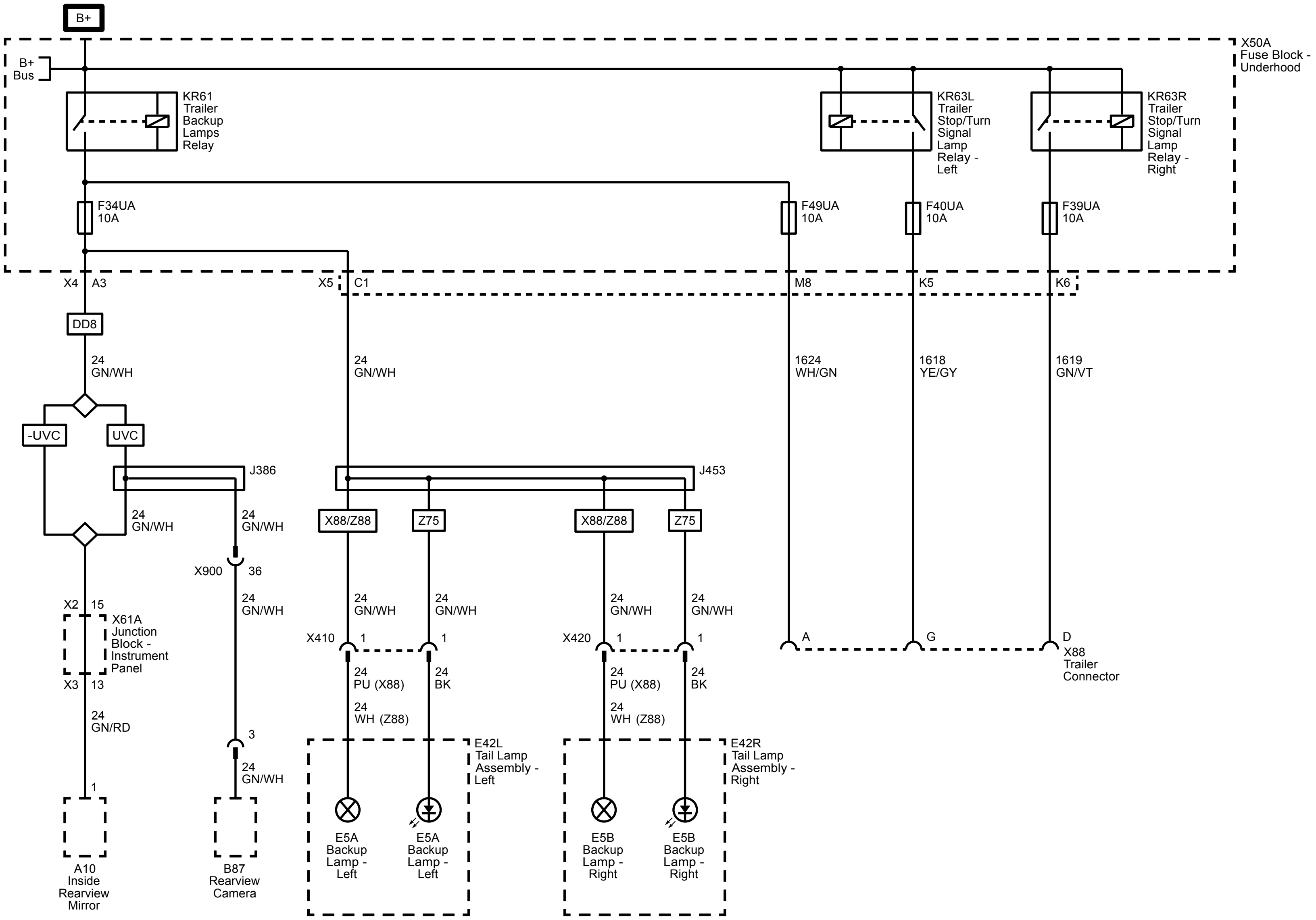

B+
B+ Bus
30
86
KR53 Park Lamps Relay
87
X50A Fuse Block - Underhood
F43UA 15A
F42UA 15A
F41UA 20A
X5
K2
X1
G1
F1
X5
K4
J3
709 VT/GY
709 VT/GY
309 GY/BN
309 GY/BN
2109 GY/BN
X410
5
YE
X420
5
YE
X110
7
X120
7
F
X88 Trailer Connector
E42L Tail Lamp Assembly - Left
E13LA Headlamp Assembly - Left
709 BU
E13RA Headlamp Assembly - Right
309 BU
E42R Tail Lamp Assembly - Right
E5E Tail Lamp - Left
E2LF Side Marker Lamp - Left Front
E2RF Side Marker Lamp - Right Front
E5F Tail Lamp - Right

F41UA, F42UA and F43UA (Z75)

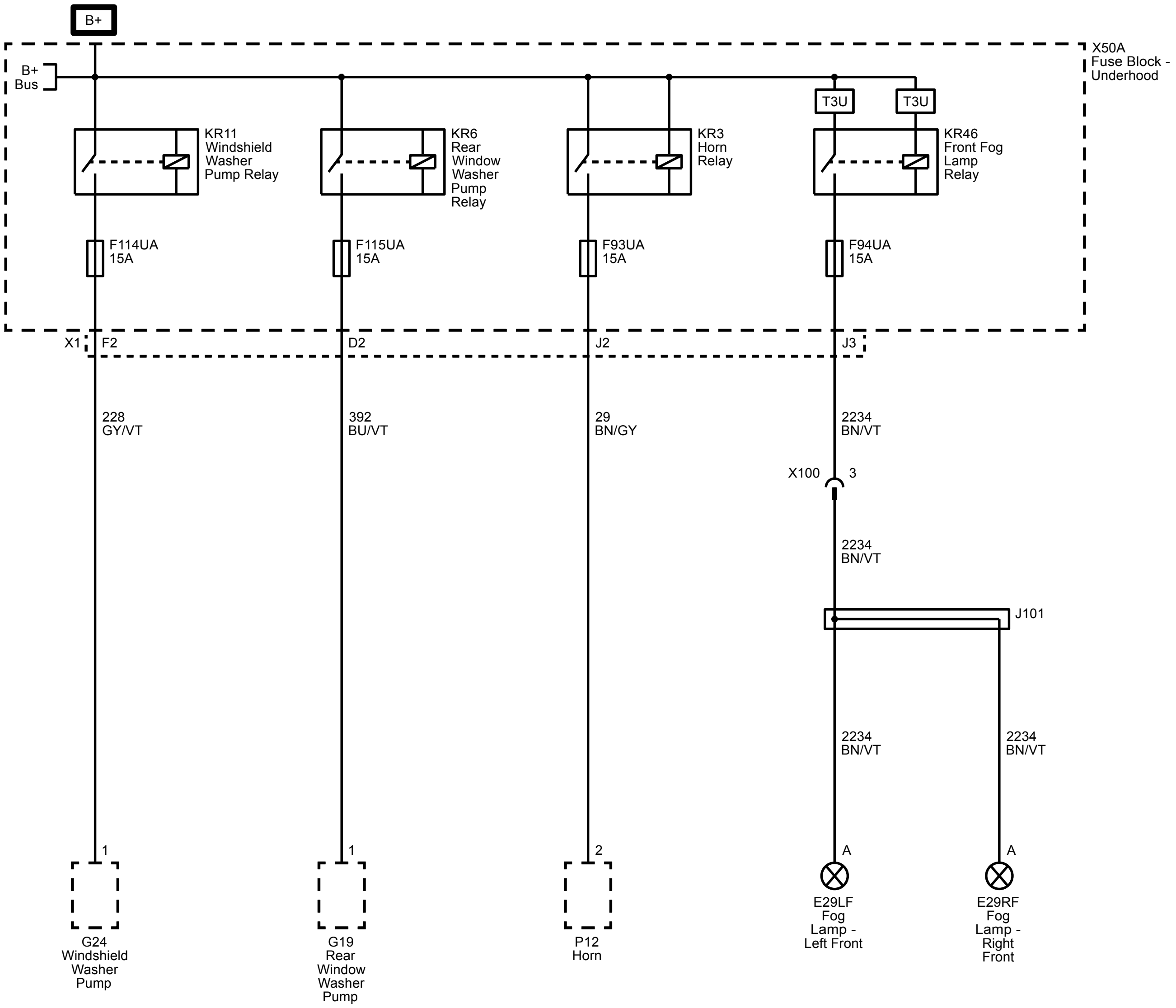


B+
B+ Bus
30
86
KR53 Park Lamps Relay
87
X50A Fuse Block - Underhood
F43UA 15A
F42UA 15A
F41UA 20A
X5 K2
X1 G1
F1
X5 K4
J3
709 VT/GY
709 VT/GY
709 VT/GY
309 GY/BN
309 GY/BN
309 GY/BN
2109 GY/BN
X100 9
24
709 VT/GY
309 GY/BN
X410 5
YE
X420 5
YE
X110 7
X101 3
X104 3
X120 7
F
X88 Trailer Connector
E42L Tail Lamp Assembly - Left
E5E Tail Lamp - Left
E13LA Headlamp Assembly - Left
709 BK
K166L Multifunction LED Control Module - Left Headlamp
E69L Multifunction Lamp Assembly - Front Fascia Left
709 BK
K167L Multifunction LED Control Module - Front Fascia Left
E69R Multifunction Lamp Assembly - Front Fascia Right
309 BK
K167R Multifunction LED Control Module - Front Fascia Right
E13RA Headlamp Assembly - Right
309 BK
K166R Multifunction LED Control Module - Right Headlamp
E42R Tail Lamp Assembly - Right
E5F Tail Lamp - Right
L O C
D E S C

F34UA, F39UA, F40UA and F49UA

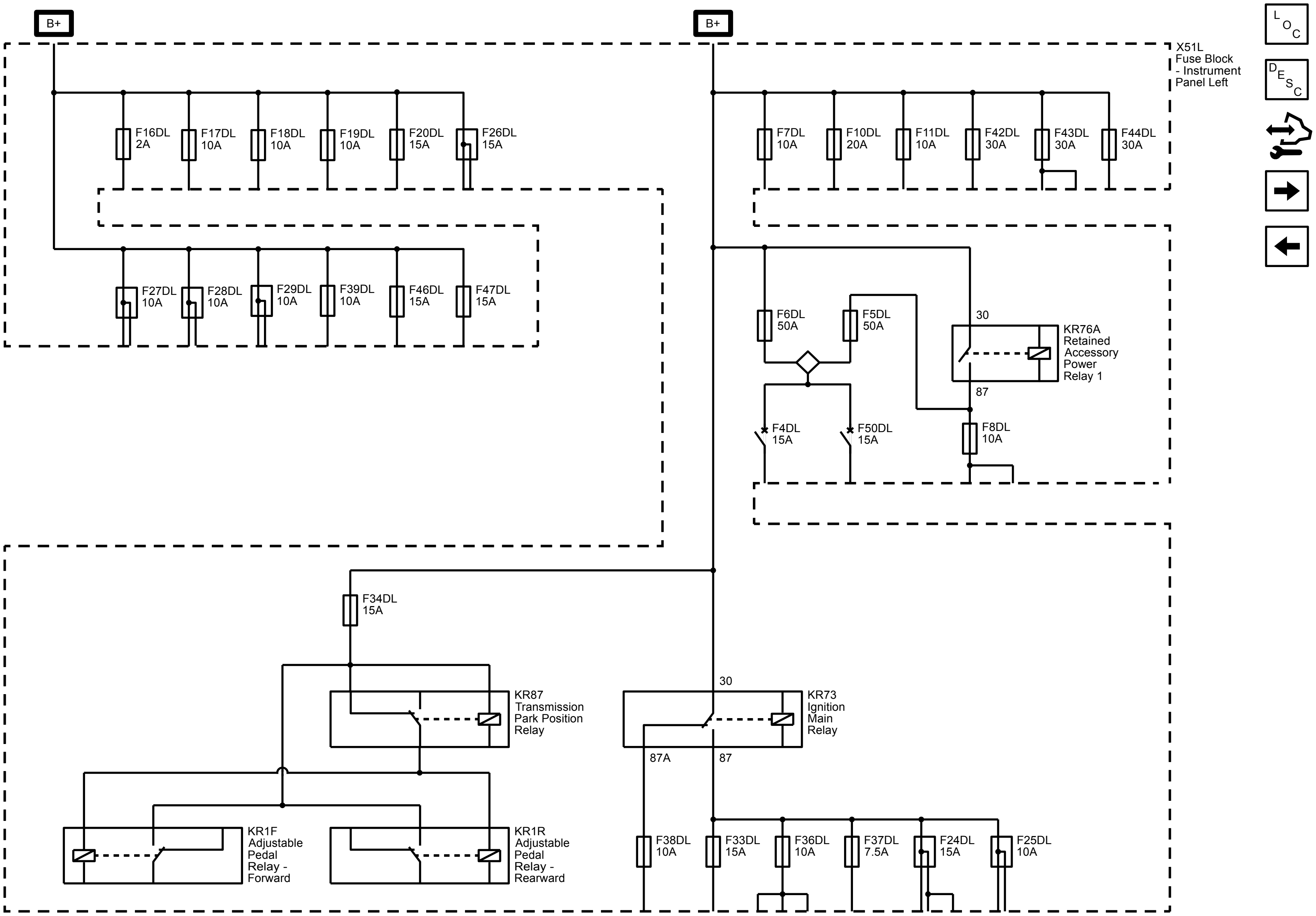

B+
B+ Bus
X50A Fuse Block - Underhood
KR61 Trailer Backup Lamps Relay
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
F34UA 10A
F49UA 10A
F40UA 10A
F39UA 10A
X4 A3
X5 C1
M8
K5
K6
DD8
24 GN/WH
-UVC
UVC
J386
J453
24 GN/WH
24 GN/WH
X900 36
24 GN/WH
X2 15
X61A Junction Block - Instrument Panel
X3 13
24 GN/RD
1
3
24 GN/WH
A10 Inside Rearview Mirror
B87 Rearview Camera
24 GN/WH
X88/Z88
Z75
X88/Z88
Z75
24 GN/WH
24 GN/WH
24 GN/WH
24 GN/WH
X410 1
1
X420 1
1
24 PU (X88)
24 WH (Z88)
24 BK
24 PU (X88)
24 WH (Z88)
24 BK
E42L Tail Lamp Assembly - Left
E42R Tail Lamp Assembly - Right
E5A Backup Lamp - Left
E5A Backup Lamp - Left
E5B Backup Lamp - Right
E5B Backup Lamp - Right
1624 WH/GN
1618 YE/GY
1619 GN/VT
A
G
D
X88 Trailer Connector

F93UA, F94UA, F114UA and F115UA

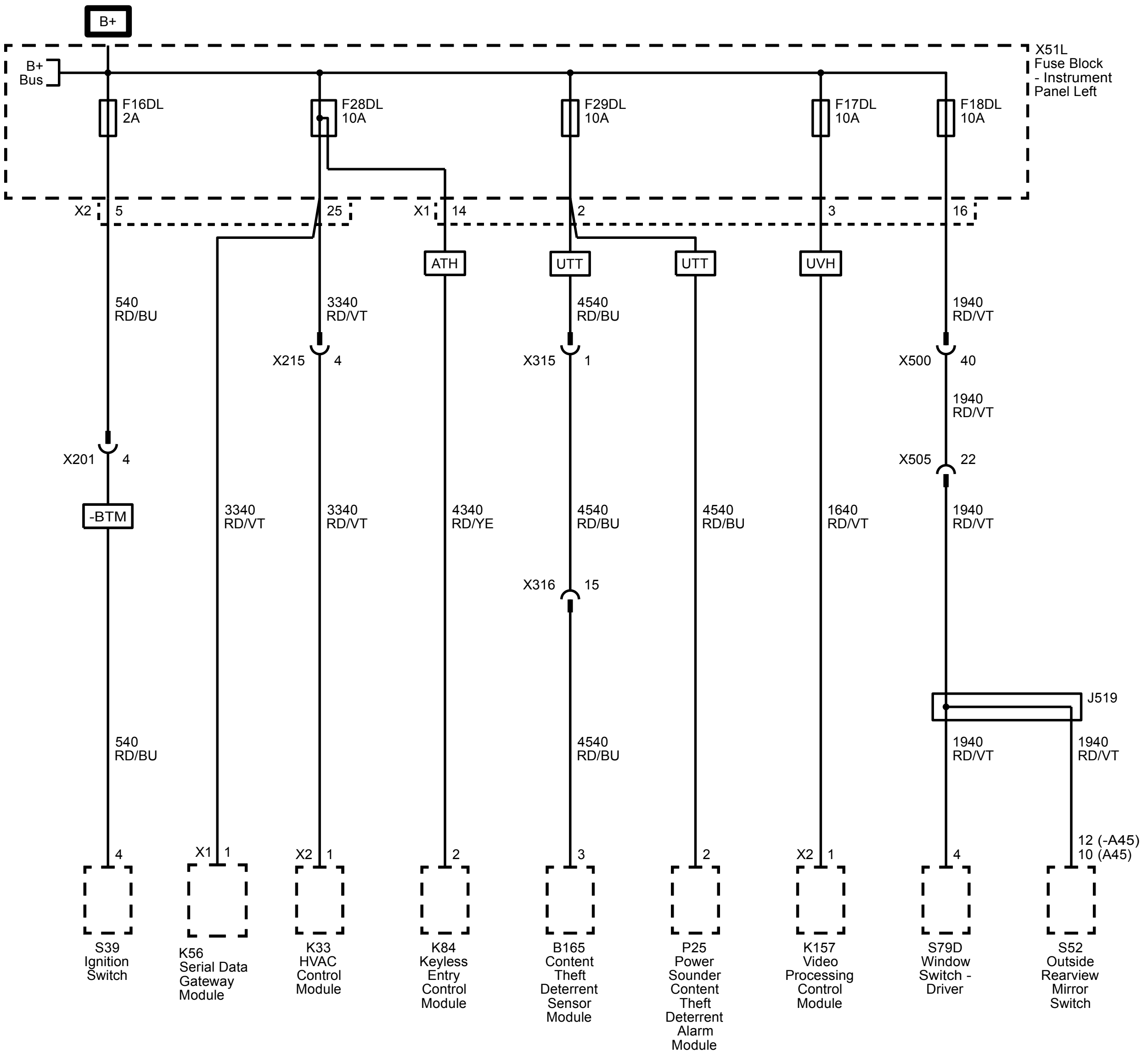


B+
B+ Bus
X50A Fuse Block - Underhood
KR11 Windshield Washer Pump Relay
KR6 Rear Window Washer Pump Relay
KR3 Horn Relay
T3U
T3U
KR46 Front Fog Lamp Relay
F114UA 15A
F115UA 15A
F93UA 15A
F94UA 15A
X1
F2
D2
J2
J3
228 GY/VT
392 BU/VT
29 BN/GY
2234 BN/VT
X100
3
2234 BN/VT
J101
2234 BN/VT
2234 BN/VT
1
1
2
A
A
G24 Windshield Washer Pump
G19 Rear Window Washer Pump
P12 Horn
E29LF Fog Lamp - Left Front
E29RF Fog Lamp - Right Front

X51L Fuse Block - Instrument Panel Left Bussing

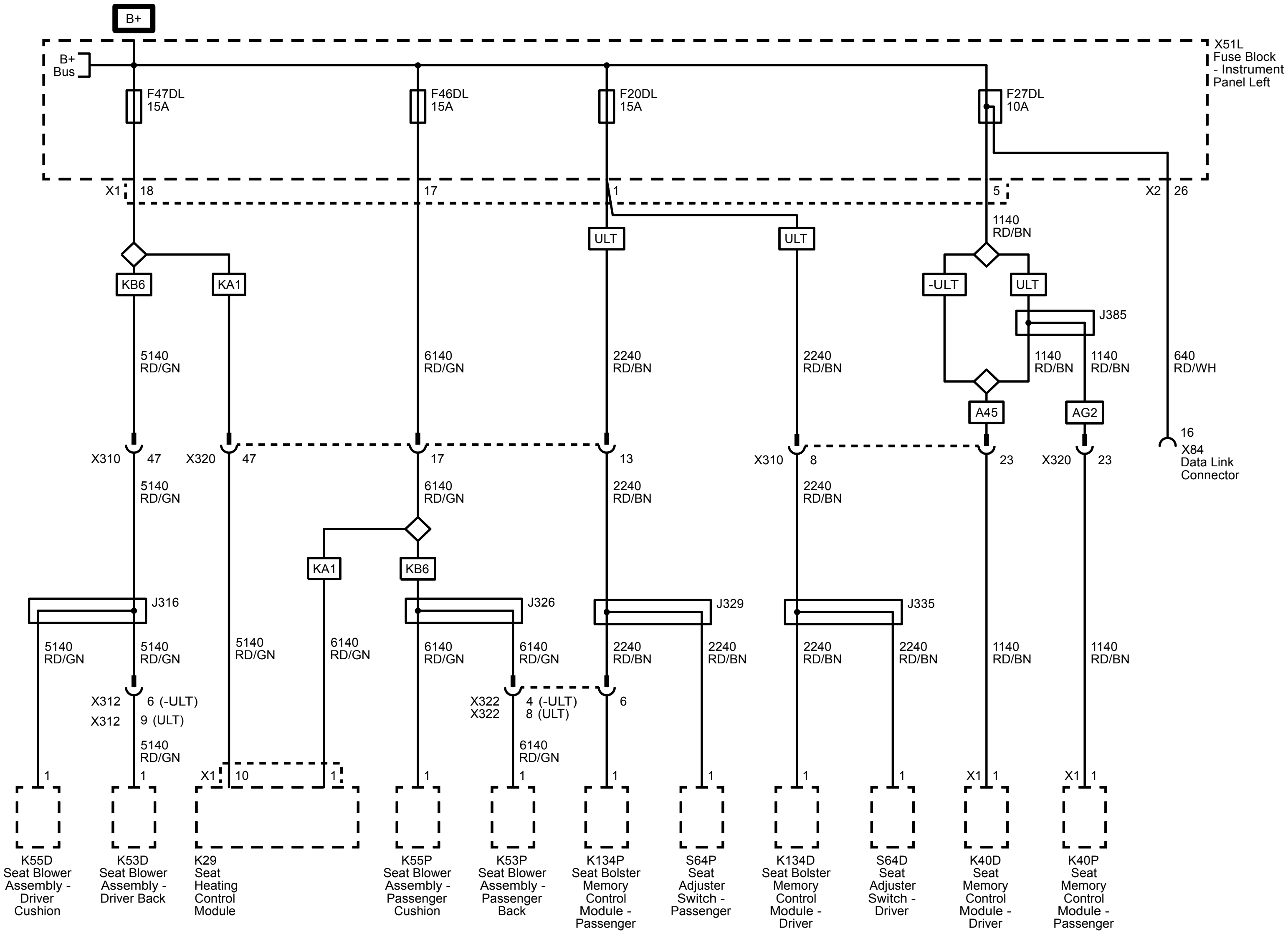

B+
B+
X51L Fuse Block - Instrument Panel Left
LOC
DESC
F16DL 2A
F17DL 10A
F18DL 10A
F19DL 10A
F20DL 15A
F26DL 15A
F7DL 10A
F10DL 20A
F11DL 10A
F42DL 30A
F43DL 30A
F44DL 30A
F27DL 10A
F28DL 10A
F29DL 10A
F39DL 10A
F46DL 15A
F47DL 15A
F6DL 50A
F5DL 50A
30
KR76A Retained Accessory Power Relay 1
87
F4DL 15A
F50DL 15A
F8DL 10A
F34DL 15A
KR87 Transmission Park Position Relay
30
KR73 Ignition Main Relay
87A
87
KR1F Adjustable Pedal Relay - Forward
KR1R Adjustable Pedal Relay - Rearward
F38DL 10A
F33DL 15A
F36DL 10A
F37DL 7.5A
F24DL 15A
F25DL 10A

F16DL, F17DL, F18DL, F28DL and F29DL



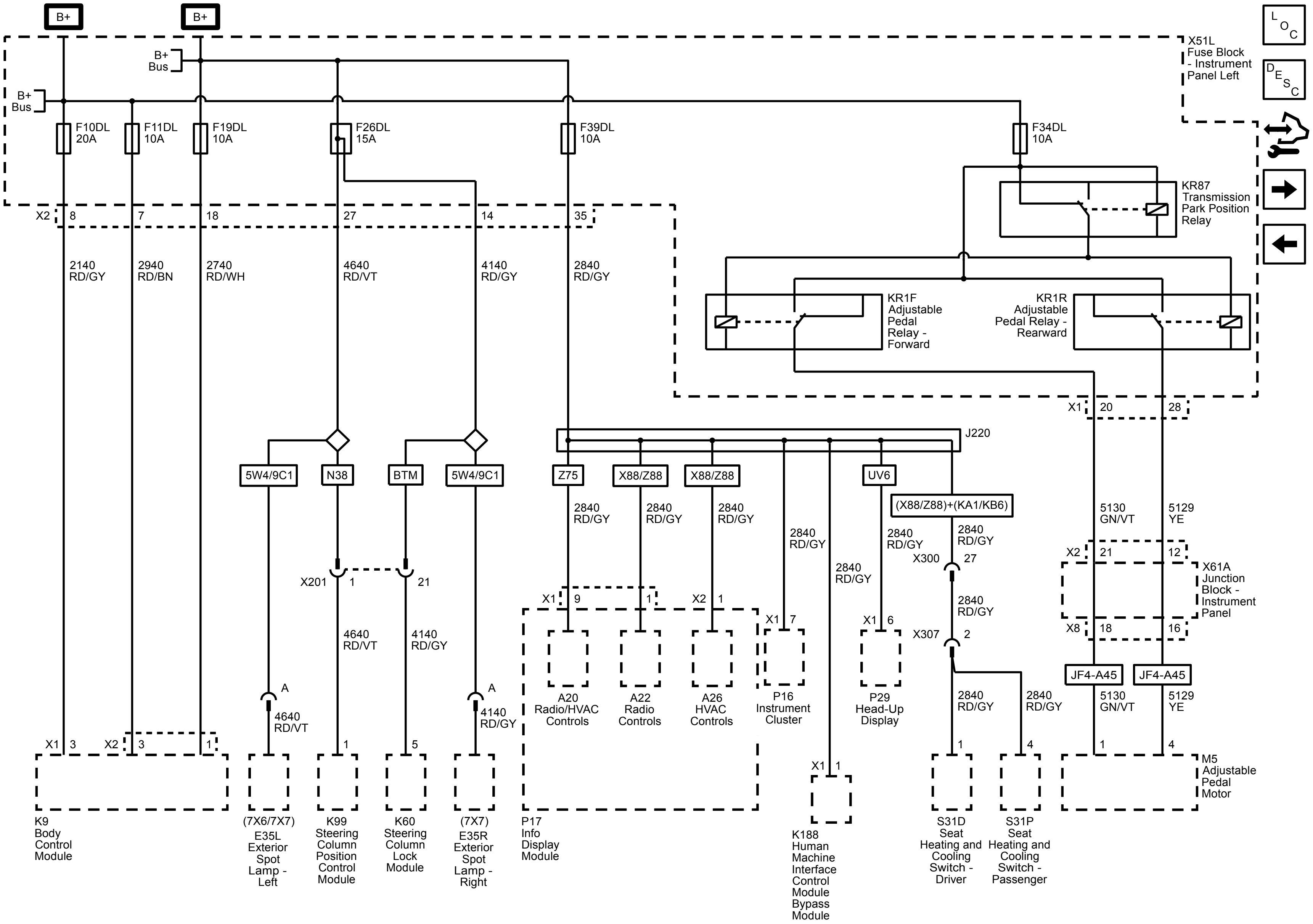
B+
B+
Bus
F16DL
2A
F28DL
10A
F29DL
10A
F17DL
10A
F18DL
10A
X51L
Fuse Block
- Instrument
Panel Left
X2
5
25
X1
14
2
3
16
ATH
UTT
UTT
UVH
540
RD/BU
3340
RD/VT
4540
RD/BU
1940
RD/VT
X215
4
X315
1
X500
40
1940
RD/VT
X201
4
X505
22
-BTM
3340
RD/VT
3340
RD/VT
4340
RD/YE
4540
RD/BU
4540
RD/BU
1640
RD/VT
1940
RD/VT
X316
15
J519
540
RD/BU
4540
RD/BU
1940
RD/VT
1940
RD/VT
4
X1
1
X2
1
2
3
2
X2
1
4
12 (-A45)
10 (A45)
S39
Ignition
Switch
K56
Serial Data
Gateway
Module
K33
HVAC
Control
Module
K84
Keyless
Entry
Control
Module
B165
Content
Theft
Deterrent
Sensor
Module
P25
Power
Sounder
Content
Theft
Deterrent
Alarm
Module
K157
Video
Processing
Control
Module
S79D
Window
Switch -
Driver
S52
Outside
Rearview
Mirror
Switch

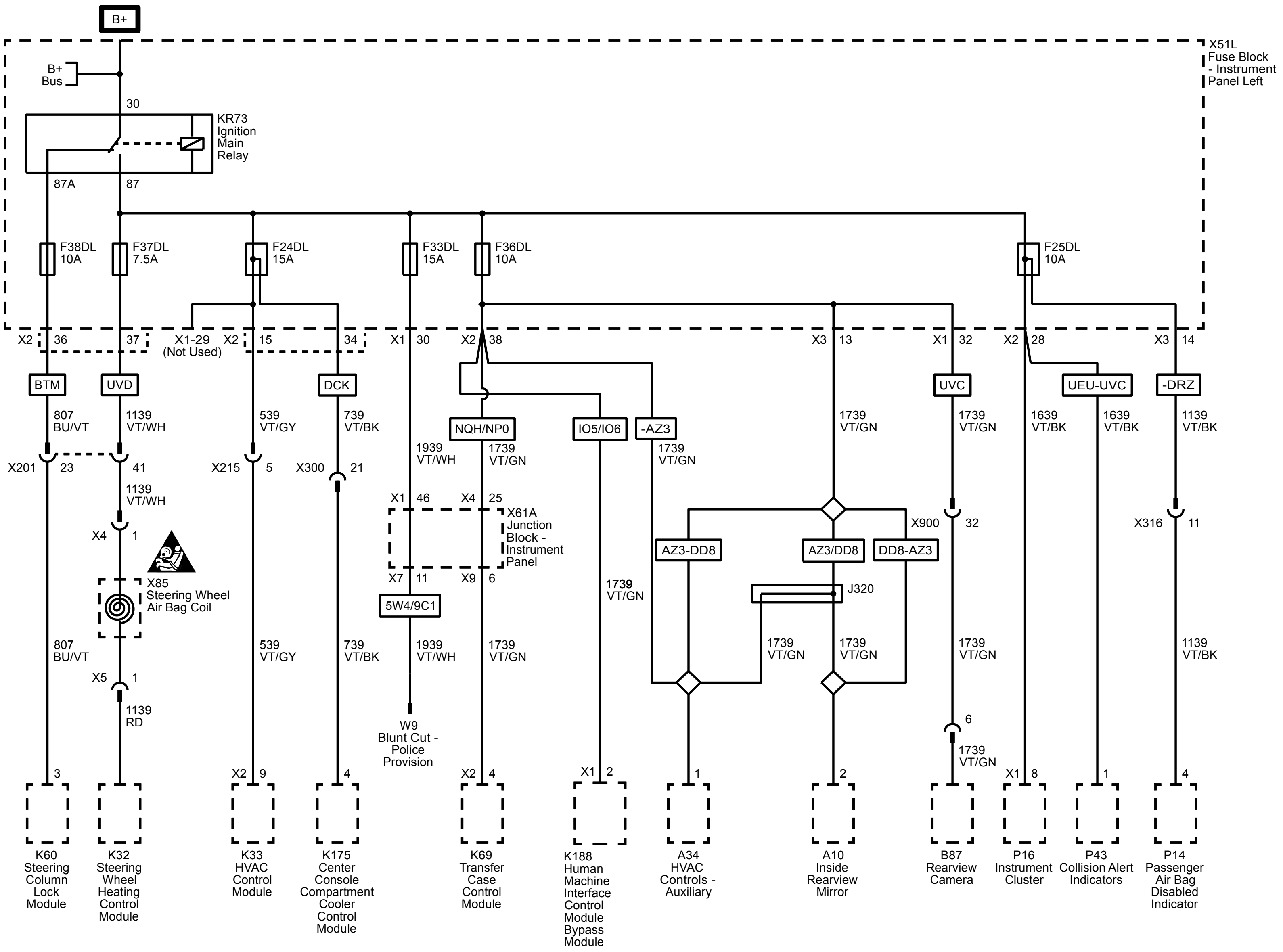
F20DL, F27DL, F46DL and F47DL



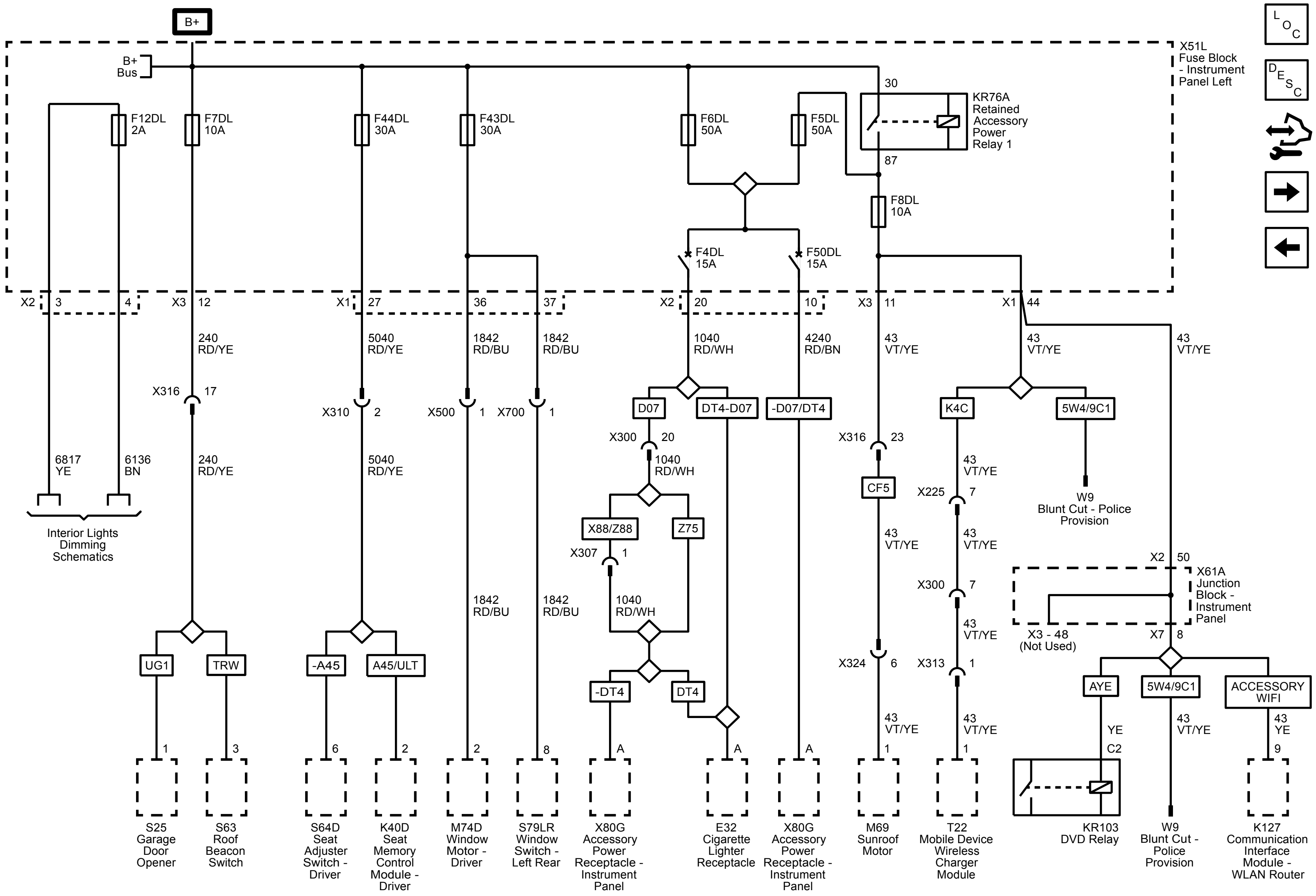
B+
B+ Bus
X51L Fuse Block - Instrument Panel Left
F47DL 15A
F46DL 15A
F20DL 15A
F27DL 10A
X1 18
17
1
5
X2 26
ULT
ULT
1140 RD/BN
KB6
KA1
-ULT
ULT
J385
5140 RD/GN
6140 RD/GN
2240 RD/BN
2240 RD/BN
1140 RD/BN
1140 RD/BN
640 RD/WH
A45
AG2
X310 47
X320 47
17
13
X310 8
23
X320 23
16
X84 Data Link Connector
5140 RD/GN
6140 RD/GN
2240 RD/BN
2240 RD/BN
KA1
KB6
J316
J326
J329
J335
5140 RD/GN
5140 RD/GN
5140 RD/GN
6140 RD/GN
6140 RD/GN
6140 RD/GN
2240 RD/BN
2240 RD/BN
2240 RD/BN
2240 RD/BN
1140 RD/BN
1140 RD/BN
X312 6 (-ULT)
X312 9 (ULT)
X322 4 (-ULT)
X322 8 (ULT)
6
5140 RD/GN
6140 RD/GN
1
1
X1 10
1
1
1
1
1
1
1
X1 1
X1 1
K55D Seat Blower Assembly - Driver Cushion
K53D Seat Blower Assembly - Driver Back
K29 Seat Heating Control Module
K55P Seat Blower Assembly - Passenger Cushion
K53P Seat Blower Assembly - Passenger Back
K134P Seat Bolster Memory Control Module - Passenger
S64P Seat Adjuster Switch - Passenger
K134D Seat Bolster Memory Control Module - Driver
S64D Seat Adjuster Switch - Driver
K40D Seat Memory Control Module - Driver
K40P Seat Memory Control Module - Passenger

F10DL, F11DL, F19DL, F26DL, F34DL and F39DL

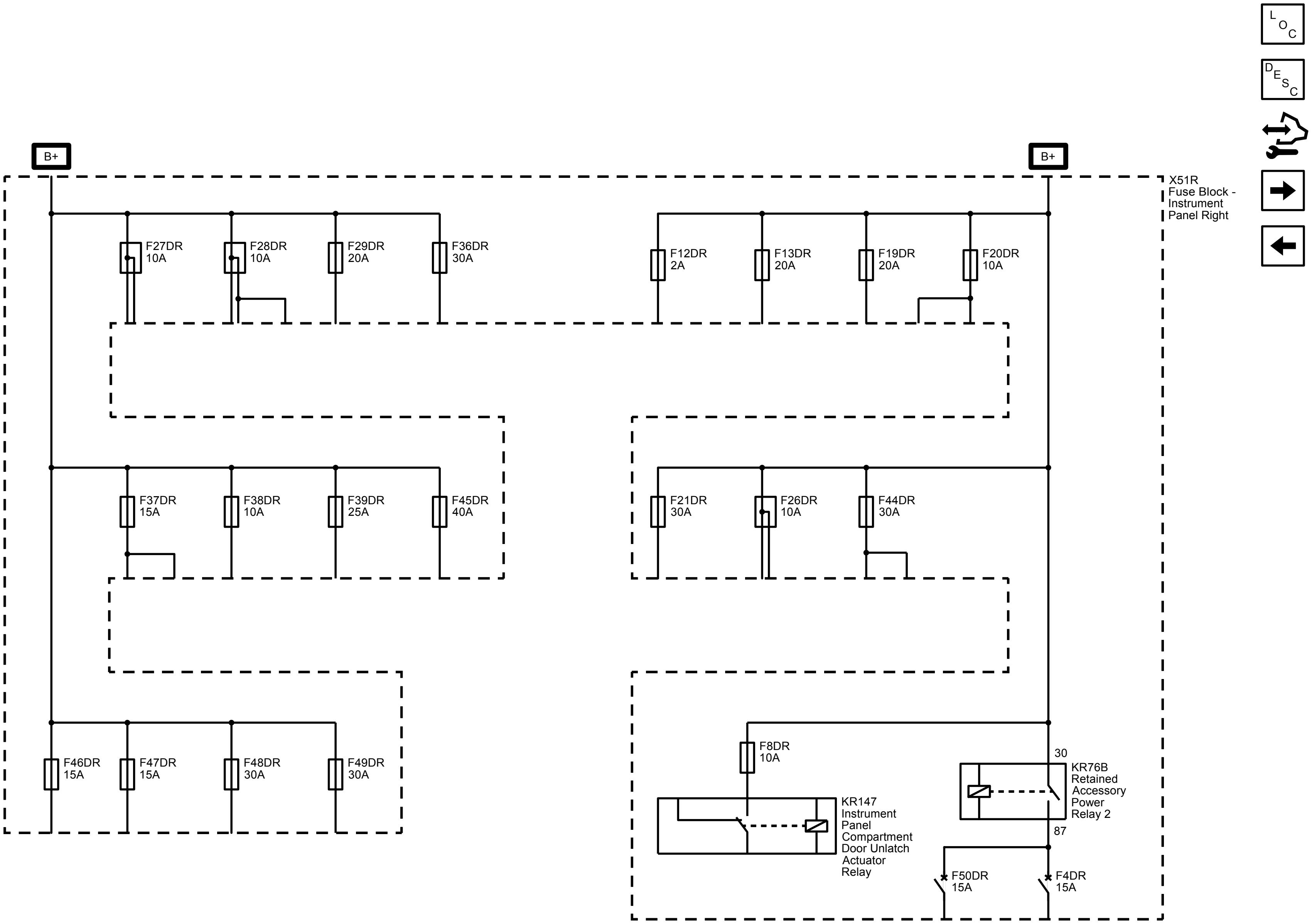

B+
B+
B+ Bus
B+ Bus
X51L Fuse Block - Instrument Panel Left
LOC
DESC
F10DL 20A
F11DL 10A
F19DL 10A
F26DL 15A
F39DL 10A
F34DL 10A
KR87 Transmission Park Position Relay
X2
8
7
18
27
14
35
2140 RD/GY
2940 RD/BN
2740 RD/WH
4640 RD/VT
4140 RD/GY
2840 RD/GY
KR1F Adjustable Pedal Relay - Forward
KR1R Adjustable Pedal Relay - Rearward
X1
20
28
J220
5W4/9C1
N38
BTM
5W4/9C1
Z75
X88/Z88
X88/Z88
UV6
(X88/Z88)+(KA1/KB6)
2840 RD/GY
2840 RD/GY
2840 RD/GY
2840 RD/GY
2840 RD/GY
2840 RD/GY
2840 RD/GY
X300
27
2840 RD/GY
X307
2
5130 GN/VT
5129 YE
X2
21
12
X61A Junction Block - Instrument Panel
X8
18
16
JF4-A45
JF4-A45
5130 GN/VT
5129 YE
X201
1
21
4640 RD/VT
4140 RD/GY
A
4640 RD/VT
A
4140 RD/GY
X1
9
1
X2
1
X1
7
X1
6
A20 Radio/HVAC Controls
A22 Radio Controls
A26 HVAC Controls
P16 Instrument Cluster
P29 Head-Up Display
2840 RD/GY
2840 RD/GY
X1
3
X2
3
1
1
5
1
4
1
4
X1
1
K9 Body Control Module
(7X6/7X7) E35L Exterior Spot Lamp - Left
K99 Steering Column Position Control Module
K60 Steering Column Lock Module
(7X7) E35R Exterior Spot Lamp - Right
P17 Info Display Module
K188 Human Machine Interface Control Module Bypass Module
S31D Seat Heating and Cooling Switch - Driver
S31P Seat Heating and Cooling Switch - Passenger
M5 Adjustable Pedal Motor


B+
B+ Bus
30
KR73 Ignition Main Relay
87A
87
X51L Fuse Block - Instrument Panel Left
F38DL 10A
F37DL 7.5A
F24DL 15A
F33DL 15A
F36DL 10A
F25DL 10A
X2 36
37
X1-29 (Not Used)
X2 15
34
X1 30
X2 38
X3 13
X1 32
X2 28
X3 14
BTM
UVD
DCK
NQH/NP0
IO5/IO6
-AZ3
UVC
UEU-UVC
-DRZ
807 BU/VT
1139 VT/WH
539 VT/GY
739 VT/BK
1939 VT/WH
1739 VT/GN
1739 VT/GN
1739 VT/GN
1739 VT/GN
1639 VT/BK
1639 VT/BK
1139 VT/BK
X201 23
41
X215 5
X300 21
1139 VT/WH
X4 1
X1 46
X4 25
X61A Junction Block - Instrument Panel
X7 11
X9 6
5W4/9C1
X900
32
X316 11
AZ3-DD8
AZ3/DD8
DD8-AZ3
J320
X85 Steering Wheel Air Bag Coil
807 BU/VT
539 VT/GY
739 VT/BK
1939 VT/WH
1739 VT/GN
1739 VT/GN
1739 VT/GN
1739 VT/GN
1739 VT/GN
1139 VT/BK
X5 1
1139 RD
W9 Blunt Cut - Police Provision
6
1739 VT/GN
3
X2 9
4
X2 4
X1 2
1
2
X1 8
1
4
K60 Steering Column Lock Module
K32 Steering Wheel Heating Control Module
K33 HVAC Control Module
K175 Center Console Compartment Cooler Control Module
K69 Transfer Case Control Module
K188 Human Machine Interface Control Module Bypass Module
A34 HVAC Controls - Auxiliary
A10 Inside Rearview Mirror
B87 Rearview Camera
P16 Instrument Cluster
P43 Collision Alert Indicators
P14 Passenger Air Bag Disabled Indicator

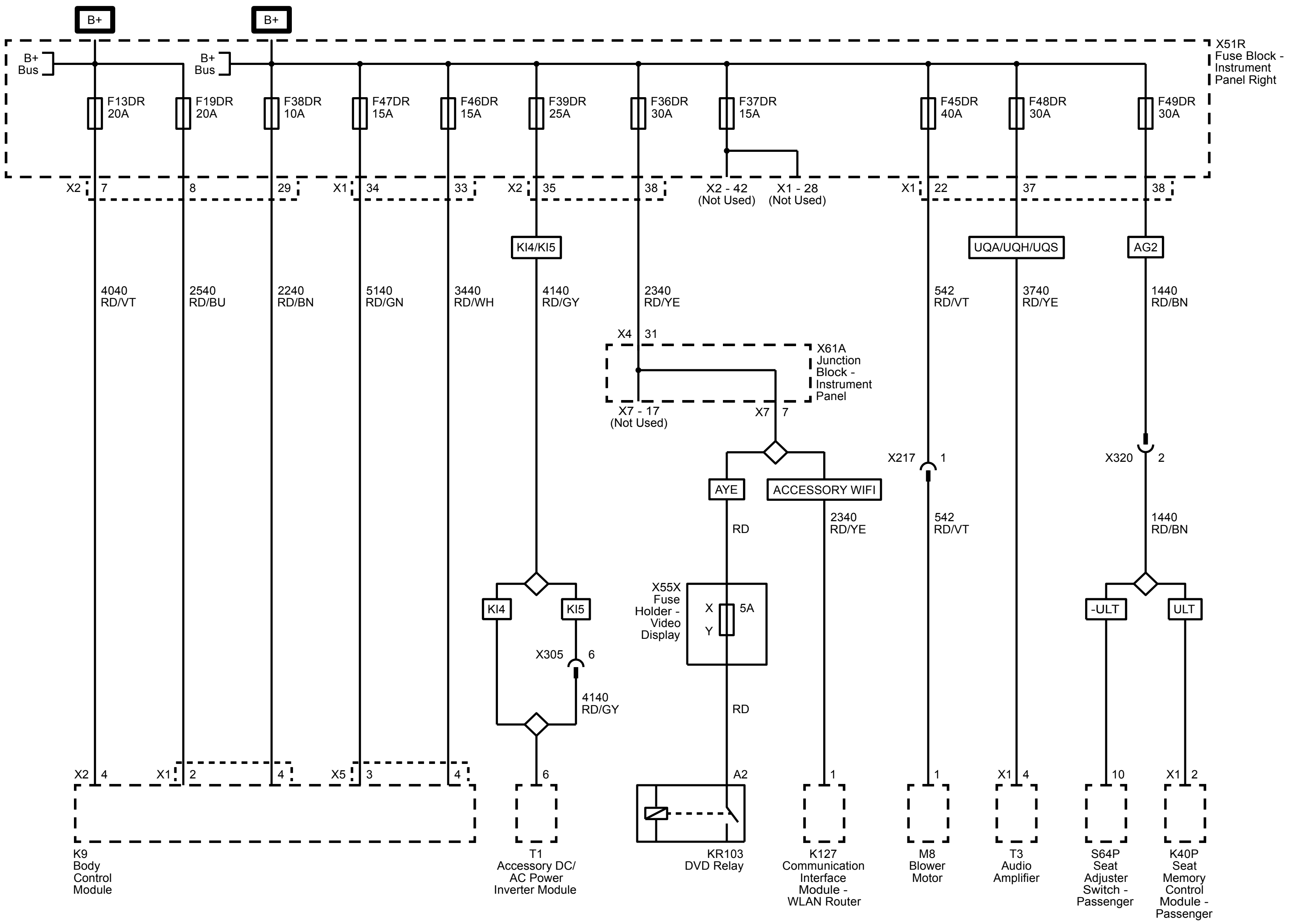
F4DL, F5DL, F6DL, F7DL, F8DL, F12DL, F16DL, F42DL, F43DL, F44DL and F50DL


B+
B+ Bus
X51L Fuse Block - Instrument Panel Left
F12DL 2A
F7DL 10A
F44DL 30A
F43DL 30A
F6DL 50A
F5DL 50A
30
KR76A Retained Accessory Power Relay 1
87
F8DL 10A
F4DL 15A
F50DL 15A
X2 3 4
X3 12
X1 27 36 37
X2 20 10
X3 11
X1 44
240 RD/YE
5040 RD/YE
1842 RD/BU
1842 RD/BU
1040 RD/WH
4240 RD/BN
43 VT/YE
43 VT/YE
43 VT/YE
X316 17
X310 2
X500 1
X700 1
D07
DT4-D07
-D07/DT4
X300 20
1040 RD/WH
X316 23
K4C
5W4/9C1
CF5
6817 YE
6136 BN
240 RD/YE
5040 RD/YE
43 VT/YE
X225 7
W9 Blunt Cut - Police Provision
Interior Lights Dimming Schematics
X88/Z88
Z75
X307 1
43 VT/YE
43 VT/YE
X2 50
X61A Junction Block - Instrument Panel
X300 7
1842 RD/BU
1842 RD/BU
1040 RD/WH
X3 - 48 (Not Used)
X7 8
43 VT/YE
X324 6
X313 1
UG1
TRW
-A45
A45/ULT
-DT4
DT4
AYE
5W4/9C1
ACCESSORY WIFI
43 VT/YE
43 VT/YE
YE
43 VT/YE
43 YE
C2
9
1 3 6 2 2 8 A A A 1 1
S25 Garage Door Opener
S63 Roof Beacon Switch
S64D Seat Adjuster Switch - Driver
K40D Seat Memory Control Module - Driver
M74D Window Motor - Driver
S79LR Window Switch - Left Rear
X80G Accessory Power Receptacle - Instrument Panel
E32 Cigarette Lighter Receptacle
X80G Accessory Power Receptacle - Instrument Panel
M69 Sunroof Motor
T22 Mobile Device Wireless Charger Module
KR103 DVD Relay
W9 Blunt Cut - Police Provision
K127 Communication Interface Module - WLAN Router
L O C
D E S C

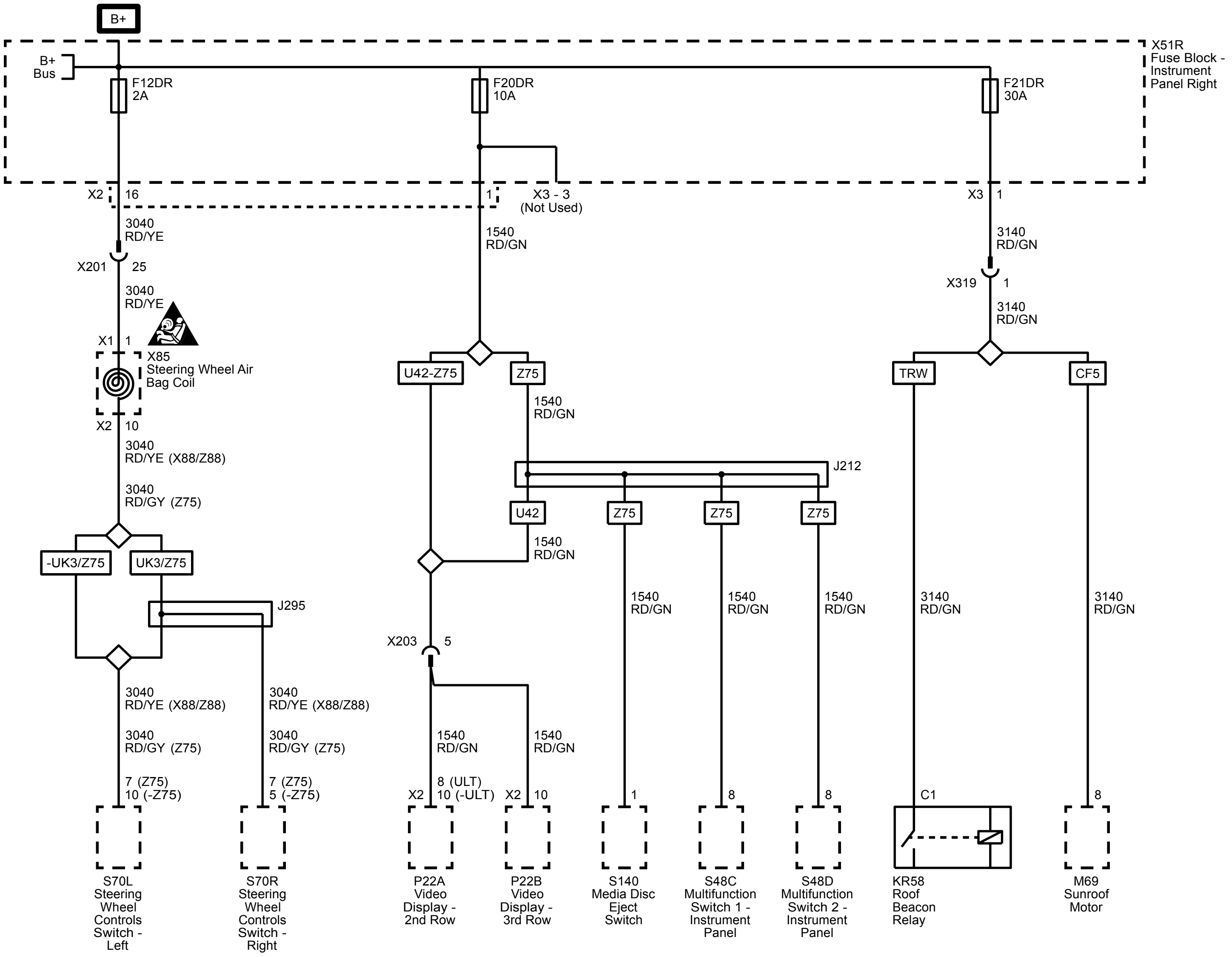
X51R Fuse Block - Instrument Panel Right Bussing


L O C
D E S C
B+
B+
X51R
Fuse Block -
Instrument
Panel Right
F27DR
10A
F28DR
10A
F29DR
20A
F36DR
30A
F12DR
2A
F13DR
20A
F19DR
20A
F20DR
10A
F37DR
15A
F38DR
10A
F39DR
25A
F45DR
40A
F21DR
30A
F26DR
10A
F44DR
30A
F46DR
15A
F47DR
15A
F48DR
30A
F49DR
30A
F8DR
10A
KR147
Instrument
Panel
Compartment
Door Unlatch
Actuator
Relay
30
KR76B
Retained
Accessory
Power
Relay 2
87
F50DR
15A
F4DR
15A

F13DR, F19DR, F36DR, F37DR, F38DR, F39DR, F45DR, F46DR, F47DR, F48DR and F49DR

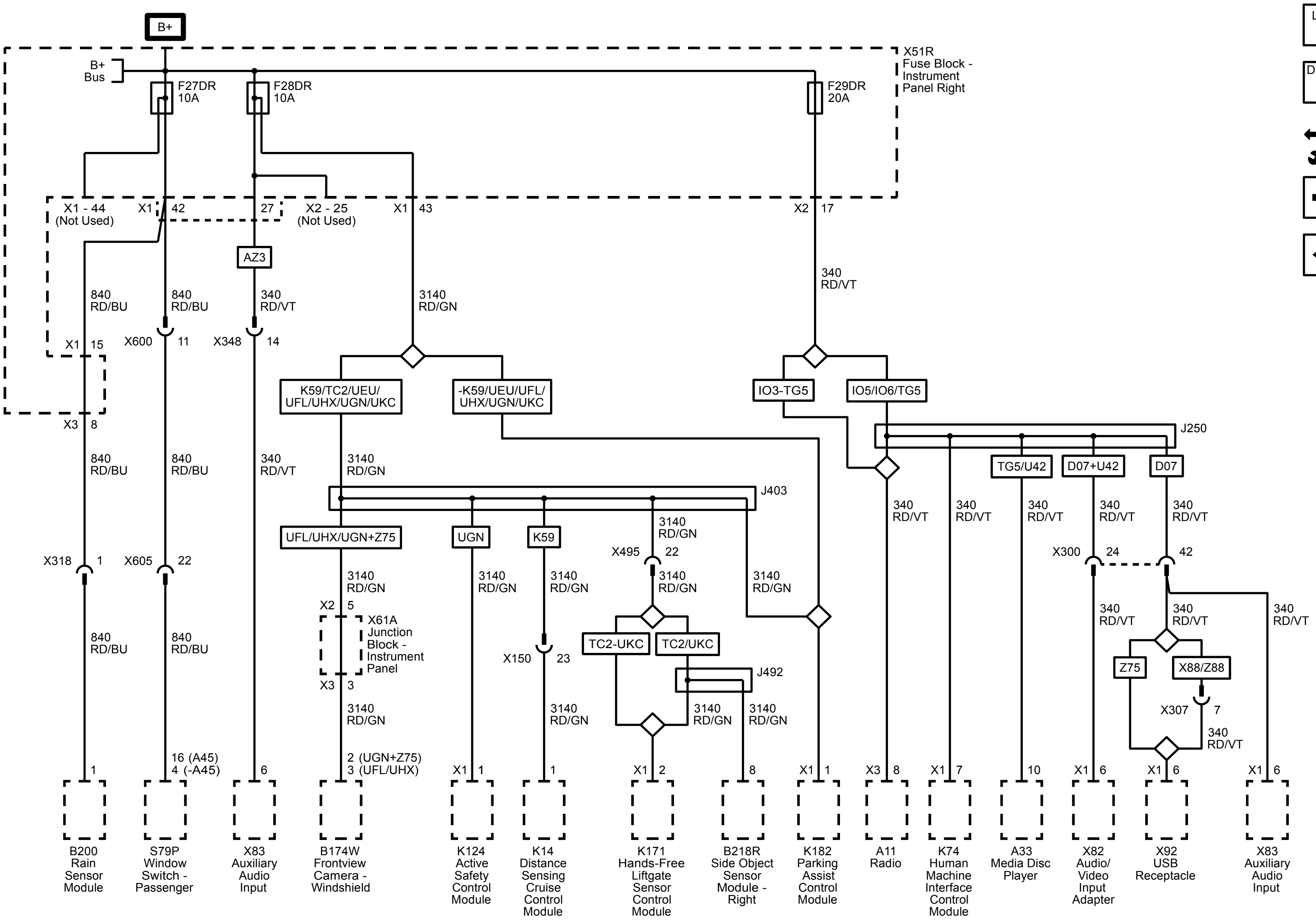

B+
B+
B+ Bus
B+ Bus
F13DR 20A
F19DR 20A
F38DR 10A
F47DR 15A
F46DR 15A
F39DR 25A
F36DR 30A
F37DR 15A
F45DR 40A
F48DR 30A
F49DR 30A
X51R Fuse Block - Instrument Panel Right
X2 7
8
29
X1 34
33
X2 35
38
X2 - 42 (Not Used)
X1 - 28 (Not Used)
X1 22
37
38
KI4/KI5
UQA/UQH/UQS
AG2
4040 RD/VT
2540 RD/BU
2240 RD/BN
5140 RD/GN
3440 RD/WH
4140 RD/GY
2340 RD/YE
542 RD/VT
3740 RD/YE
1440 RD/BN
X4 31
X61A Junction Block - Instrument Panel
X7 - 17 (Not Used)
X7 7
X217 1
X320 2
AYE
ACCESSORY WIFI
RD
2340 RD/YE
542 RD/VT
1440 RD/BN
KI4
KI5
X305 6
4140 RD/GY
X55X Fuse Holder - Video Display
X
Y
5A
RD
-ULT
ULT
X2 4
X1 2
4
X5 3
4
6
A2
1
1
X1 4
10
X1 2
K9 Body Control Module
T1 Accessory DC/ AC Power Inverter Module
KR103 DVD Relay
K127 Communication Interface Module - WLAN Router
M8 Blower Motor
T3 Audio Amplifier
S64P Seat Adjuster Switch - Passenger
K40P Seat Memory Control Module - Passenger

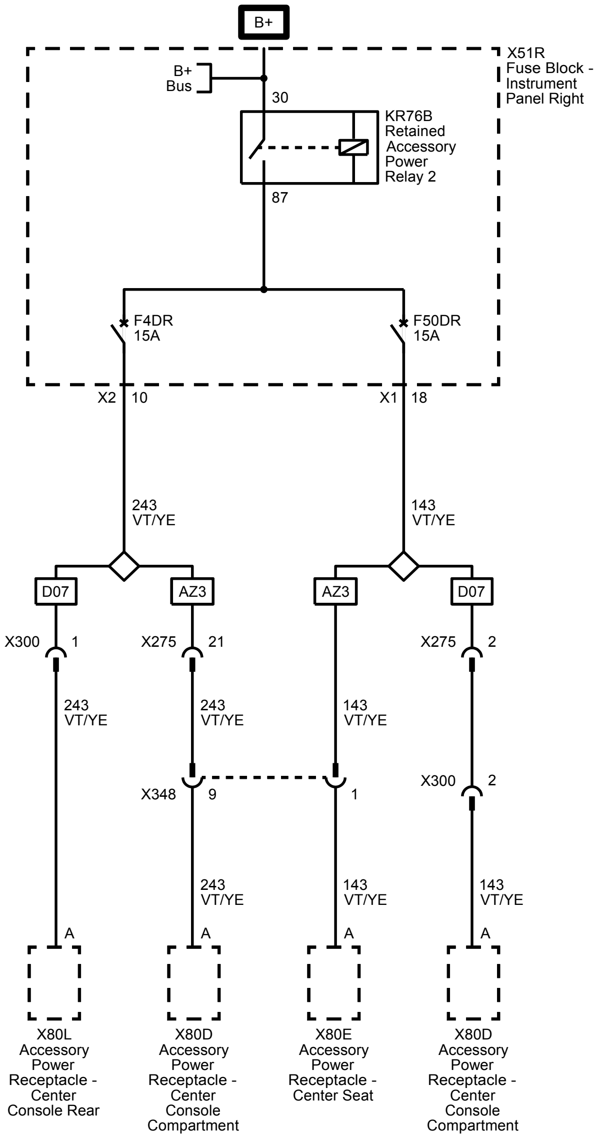
F12DR, F20DR and F21DR



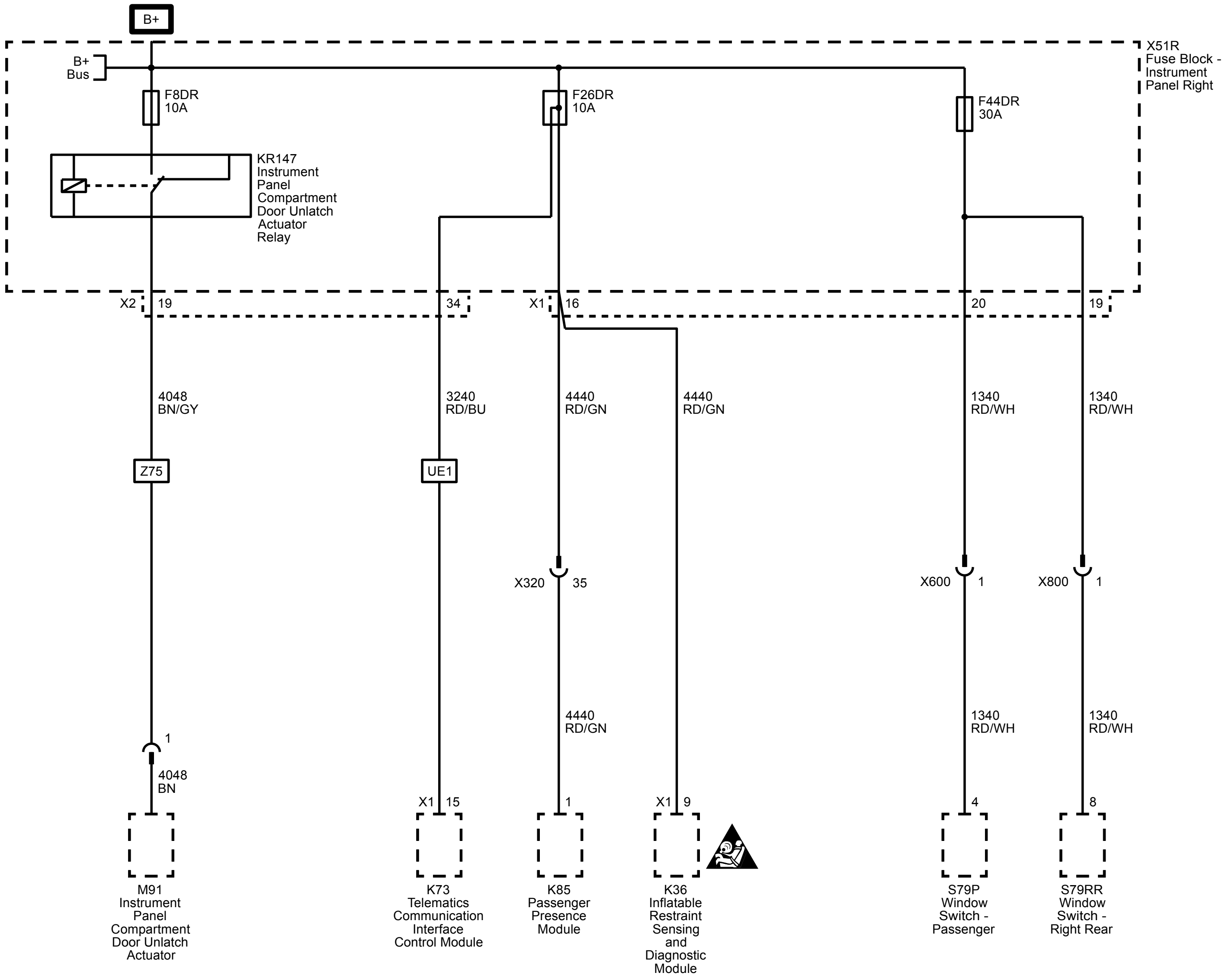
B+
B+ Bus
F12DR 2A
F20DR 10A
F21DR 30A
X51R Fuse Block - Instrument Panel Right
X2 16
1
X3 - 3 (Not Used)
X3 1
3040 RD/YE
X201 25
3040 RD/YE
X1 1
X85 Steering Wheel Air Bag Coil
X2 10
3040 RD/YE (X88/Z88)
3040 RD/GY (Z75)
-UK3/Z75
UK3/Z75
J295
3040 RD/YE (X88/Z88)
3040 RD/GY (Z75)
7 (Z75)
10 (-Z75)
3040 RD/YE (X88/Z88)
3040 RD/GY (Z75)
7 (Z75)
5 (-Z75)
S70L Steering Wheel Controls Switch - Left
S70R Steering Wheel Controls Switch - Right
1540 RD/GN
U42-Z75
Z75
1540 RD/GN
J212
U42
Z75
Z75
Z75
1540 RD/GN
X203 5
1540 RD/GN
1540 RD/GN
X2 8 (ULT)
10 (-ULT)
X2 10
P22A Video Display - 2nd Row
P22B Video Display - 3rd Row
1540 RD/GN
1
S140 Media Disc Eject Switch
1540 RD/GN
8
S48C Multifunction Switch 1 - Instrument Panel
1540 RD/GN
8
S48D Multifunction Switch 2 - Instrument Panel
3140 RD/GN
X319 1
3140 RD/GN
TRW
CF5
3140 RD/GN
C1
KR58 Roof Beacon Relay
3140 RD/GN
8
M69 Sunroof Motor

F27DR, F28DR and F29DR

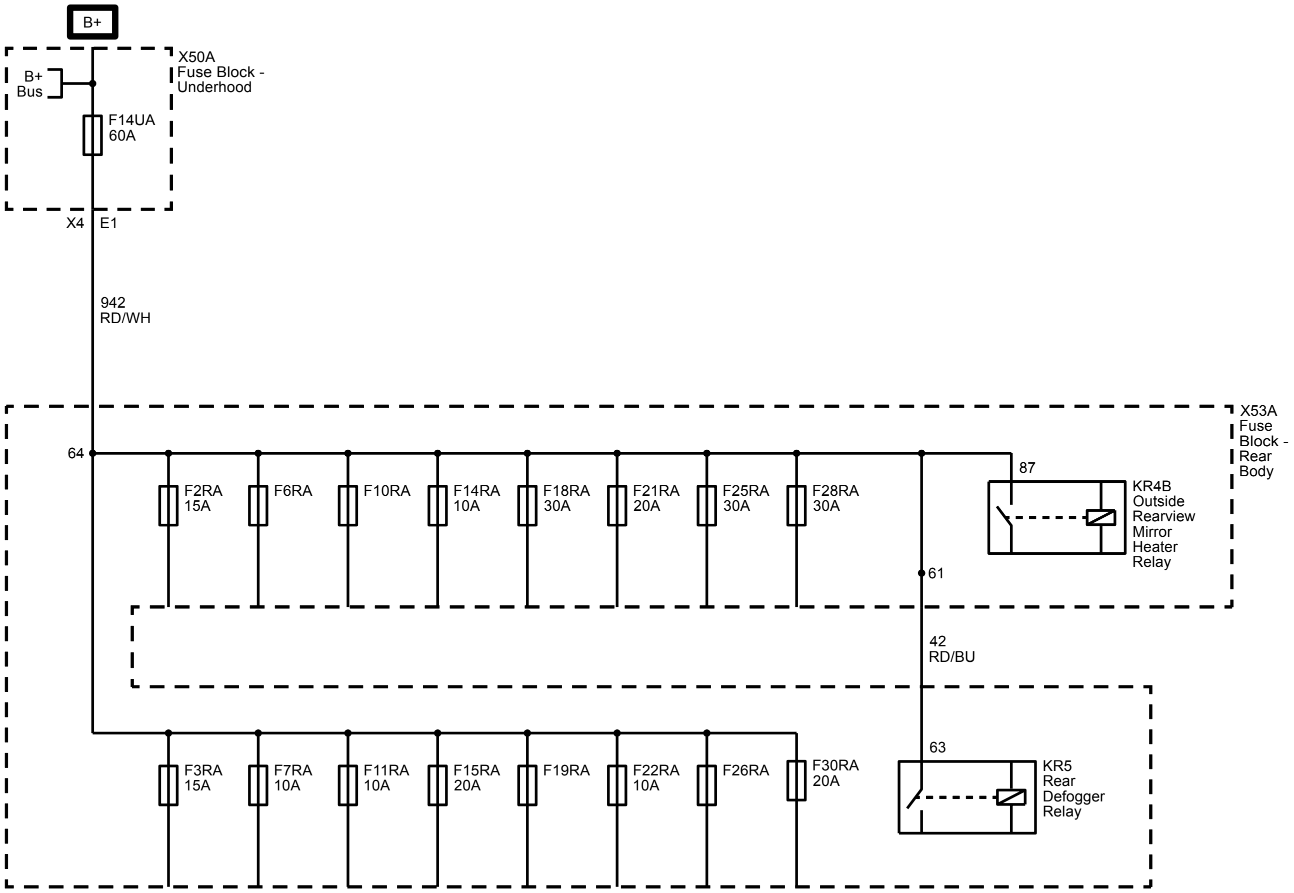

B+
B+ Bus
F27DR 10A
F28DR 10A
F29DR 20A
X51R Fuse Block - Instrument Panel Right
X1 - 44 (Not Used)
X1 42
27
X2 - 25 (Not Used)
X1 43
X2 17
AZ3
840 RD/BU
840 RD/BU
340 RD/VT
3140 RD/GN
340 RD/VT
X1 15
X600 11
X348 14
X3 8
K59/TC2/UEU/UFL/UHX/UGN/UKC
-K59/UEU/UFL/UHX/UGN/UKC
IO3-TG5
IO5/IO6/TG5
J250
840 RD/BU
840 RD/BU
340 RD/VT
3140 RD/GN
J403
TG5/U42
D07+U42
D07
340 RD/VT
340 RD/VT
340 RD/VT
340 RD/VT
340 RD/VT
UFL/UHX/UGN+Z75
UGN
K59
3140 RD/GN
X495 22
X318 1
X605 22
X300 24
42
3140 RD/GN
3140 RD/GN
3140 RD/GN
3140 RD/GN
3140 RD/GN
840 RD/BU
840 RD/BU
X2 5
X61A Junction Block - Instrument Panel
X3 3
TC2-UKC
TC2/UKC
J492
X150 23
340 RD/VT
340 RD/VT
340 RD/VT
Z75
X88/Z88
X307 7
3140 RD/GN
3140 RD/GN
3140 RD/GN
3140 RD/GN
340 RD/VT
1
16 (A45)
4 (-A45)
6
2 (UGN+Z75)
3 (UFL/UHX)
X1 1
1
X1 2
8
X1 1
X3 8
X1 7
10
X1 6
X1 6
X1 6
B200 Rain Sensor Module
S79P Window Switch - Passenger
X83 Auxiliary Audio Input
B174W Frontview Camera - Windshield
K124 Active Safety Control Module
K14 Distance Sensing Cruise Control Module
K171 Hands-Free Liftgate Sensor Control Module
B218R Side Object Sensor Module - Right
K182 Parking Assist Control Module
A11 Radio
K74 Human Machine Interface Control Module
A33 Media Disc Player
X82 Audio/ Video Input Adapter
X92 USB Receptacle
X83 Auxiliary Audio Input


B+
X51R
Fuse Block -
Instrument
Panel Right
B+
Bus
30
KR76B
Retained
Accessory
Power
Relay 2
87
F4DR
15A
F50DR
15A
X2
10
X1
18
243
VT/YE
143
VT/YE
D07
AZ3
AZ3
D07
X300
1
X275
21
X275
2
243
VT/YE
243
VT/YE
143
VT/YE
X348
9
1
X300
2
243
VT/YE
143
VT/YE
143
VT/YE
A
A
A
A
X80L
Accessory
Power
Receptacle -
Center
Console Rear
X80D
Accessory
Power
Receptacle -
Center
Console
Compartment
X80E
Accessory
Power
Receptacle -
Center Seat
X80D
Accessory
Power
Receptacle -
Center
Console
Compartment

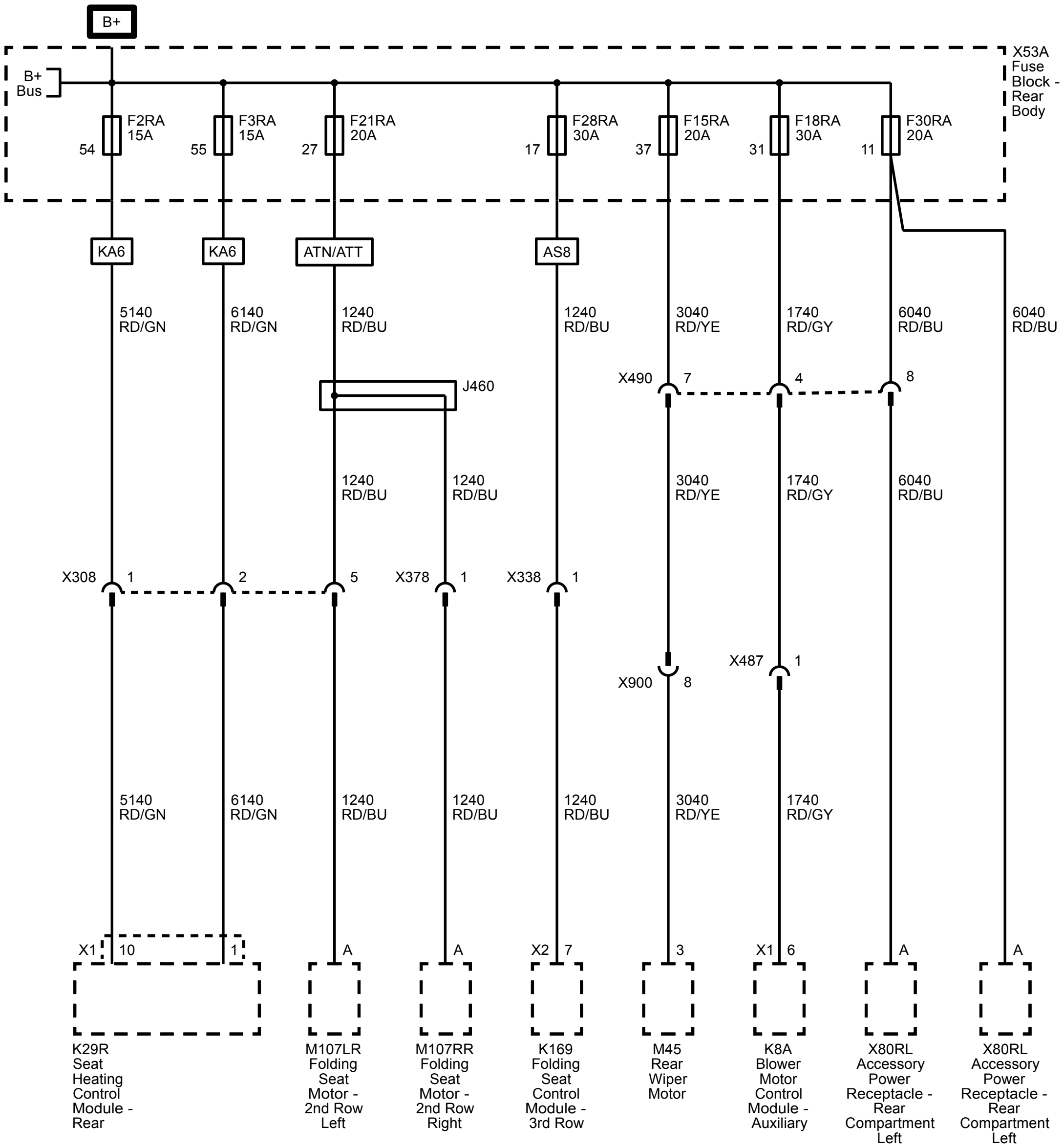
F8DR, F26DR and F44DR


B+
B+ Bus
X51R Fuse Block - Instrument Panel Right
F8DR 10A
F26DR 10A
F44DR 30A
KR147 Instrument Panel Compartment Door Unlatch Actuator Relay
X2
19
34
X1
16
20
19
4048 BN/GY
3240 RD/BU
4440 RD/GN
4440 RD/GN
1340 RD/WH
1340 RD/WH
Z75
UE1
X320
35
X600
1
X800
1
4440 RD/GN
1340 RD/WH
1340 RD/WH
1
4048 BN
X1
15
1
X1
9
4
8
M91 Instrument Panel Compartment Door Unlatch Actuator
K73 Telematics Communication Interface Control Module
K85 Passenger Presence Module
K36 Inflatable Restraint Sensing and Diagnostic Module
S79P Window Switch - Passenger
S79RR Window Switch - Right Rear

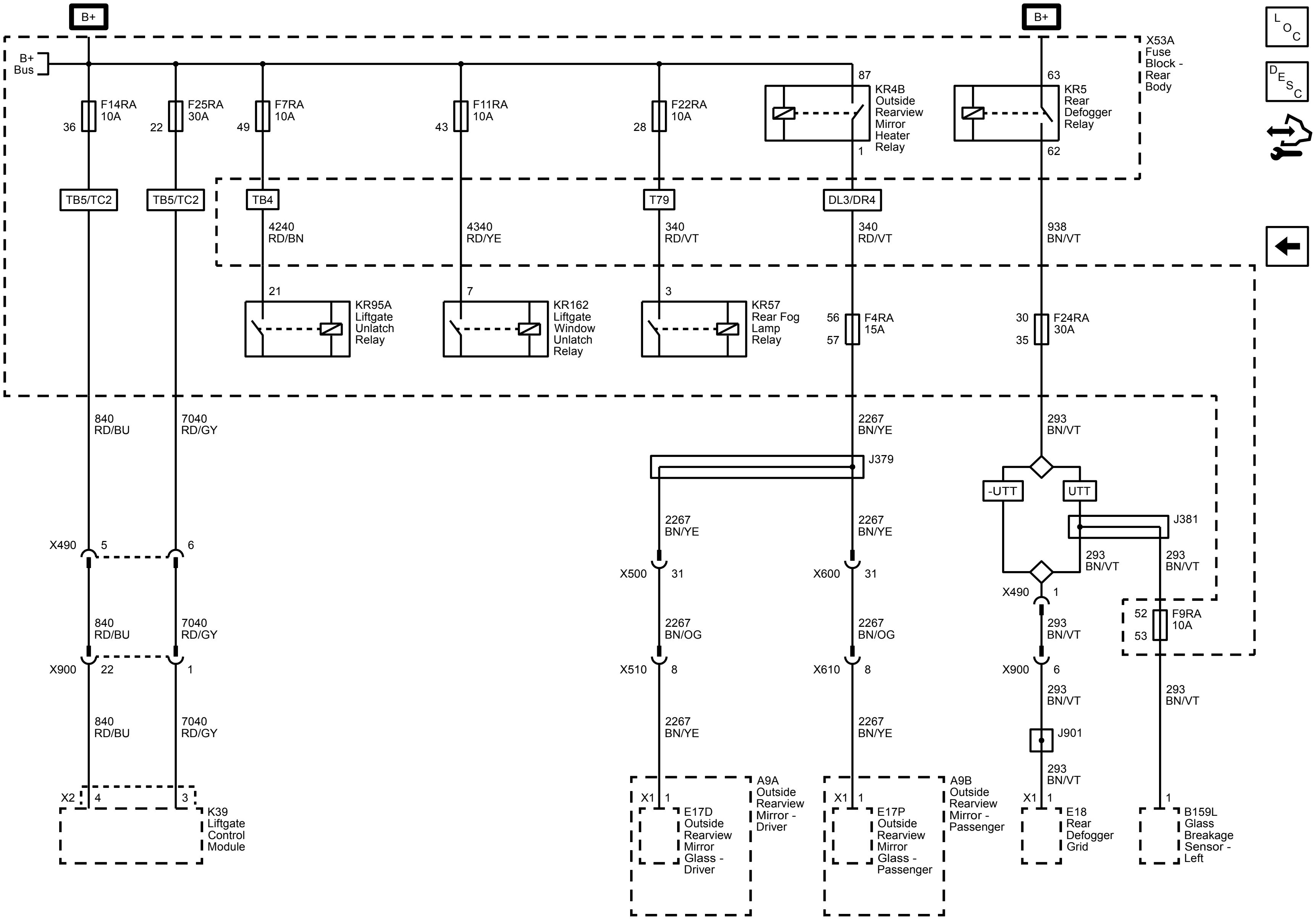
X53A Fuse Block - Rear Body Bussing


B+
B+
Bus
X50A
Fuse Block -
Underhood
F14UA
60A
X4
E1
942
RD/WH
X53A
Fuse
Block -
Rear
Body
64
F2RA
15A
F6RA
F10RA
F14RA
10A
F18RA
30A
F21RA
20A
F25RA
30A
F28RA
30A
87
KR4B
Outside
Rearview
Mirror
Heater
Relay
61
42
RD/BU
63
F3RA
15A
F7RA
10A
F11RA
10A
F15RA
20A
F19RA
F22RA
10A
F26RA
F30RA
20A
KR5
Rear
Defogger
Relay

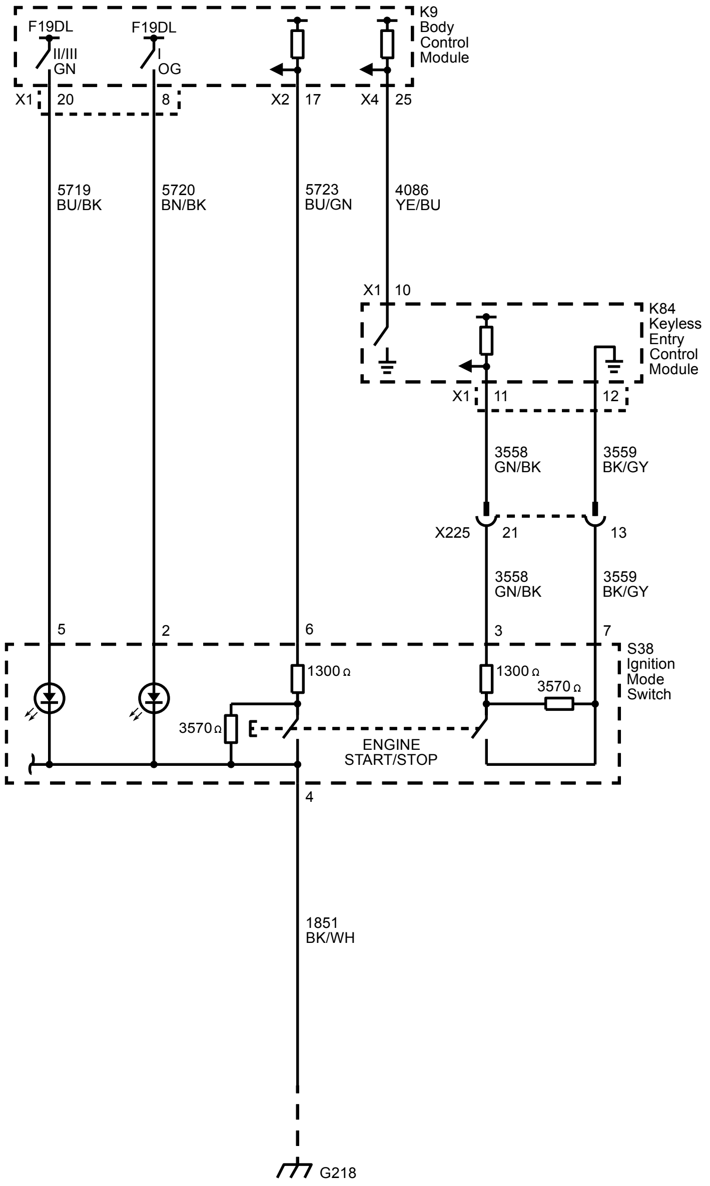
F2RA, F3RA, F15RA, F18RA, F21RA, F28RA and F30RA


B+
B+ Bus
X53A Fuse Block - Rear Body
F2RA 15A
54
F3RA 15A
55
F21RA 20A
27
F28RA 30A
17
F15RA 20A
37
F18RA 30A
31
F30RA 20A
11
KA6
KA6
ATN/ATT
AS8
5140 RD/GN
6140 RD/GN
1240 RD/BU
1240 RD/BU
3040 RD/YE
1740 RD/GY
6040 RD/BU
6040 RD/BU
J460
X490
7
4
8
1240 RD/BU
1240 RD/BU
3040 RD/YE
1740 RD/GY
6040 RD/BU
X308
1
2
5
X378
1
X338
1
X900
8
X487
1
5140 RD/GN
6140 RD/GN
1240 RD/BU
1240 RD/BU
1240 RD/BU
3040 RD/YE
1740 RD/GY
X1
10
1
A
A
X2
7
3
X1
6
A
A
K29R Seat Heating Control Module - Rear
M107LR Folding Seat Motor - 2nd Row Left
M107RR Folding Seat Motor - 2nd Row Right
K169 Folding Seat Control Module - 3rd Row
M45 Rear Wiper Motor
K8A Blower Motor Control Module - Auxiliary
X80RL Accessory Power Receptacle - Rear Compartment Left
X80RL Accessory Power Receptacle - Rear Compartment Left

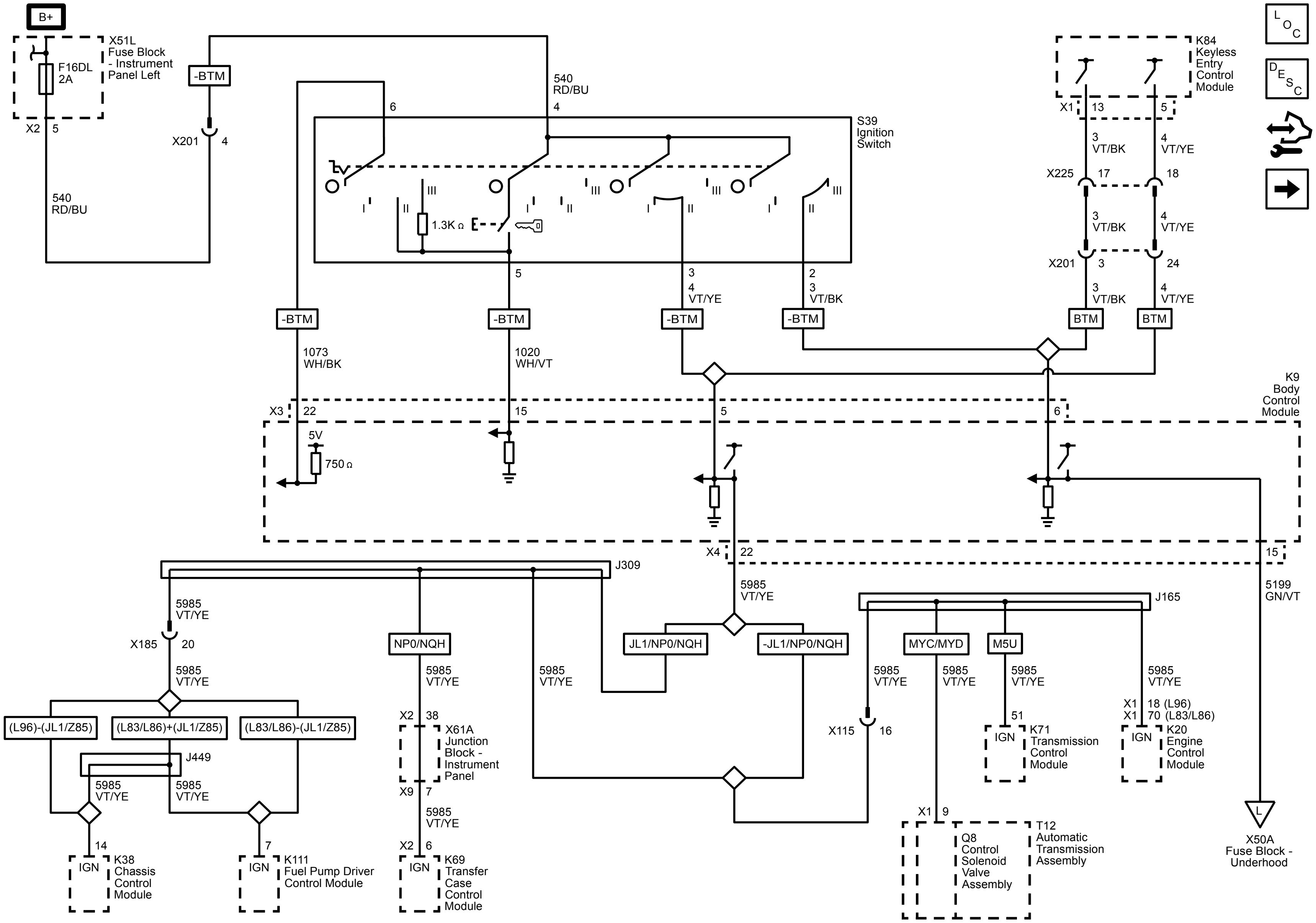
F4RA, F7RA, F9RA, F11RA, F14RA, F22RA, F24RA and F25RA


B+
B+
B+ Bus
X53A Fuse Block - Rear Body
F14RA 10A
36
F25RA 30A
22
F7RA 10A
49
F11RA 10A
43
F22RA 10A
28
87
KR4B Outside Rearview Mirror Heater Relay
1
63
KR5 Rear Defogger Relay
62
TB5/TC2
TB5/TC2
TB4
T79
DL3/DR4
4240 RD/BN
4340 RD/YE
340 RD/VT
340 RD/VT
938 BN/VT
21
KR95A Liftgate Unlatch Relay
7
KR162 Liftgate Window Unlatch Relay
3
KR57 Rear Fog Lamp Relay
56
F4RA 15A
57
30
F24RA 30A
35
840 RD/BU
7040 RD/GY
2267 BN/YE
293 BN/VT
J379
-UTT
UTT
J381
2267 BN/YE
2267 BN/YE
X490
5
6
X500
31
X600
31
293 BN/VT
293 BN/VT
X490
1
52
F9RA 10A
53
840 RD/BU
7040 RD/GY
2267 BN/OG
2267 BN/OG
293 BN/VT
X900
22
1
X510
8
X610
8
X900
6
840 RD/BU
7040 RD/GY
2267 BN/YE
2267 BN/YE
293 BN/VT
293 BN/VT
J901
293 BN/VT
X2
4
3
K39 Liftgate Control Module
A9A Outside Rearview Mirror - Driver
X1
1
E17D Outside Rearview Mirror Glass - Driver
A9B Outside Rearview Mirror - Passenger
X1
1
E17P Outside Rearview Mirror Glass - Passenger
X1
1
E18 Rear Defogger Grid
1
B159L Glass Breakage Sensor - Left
LOC
DESC

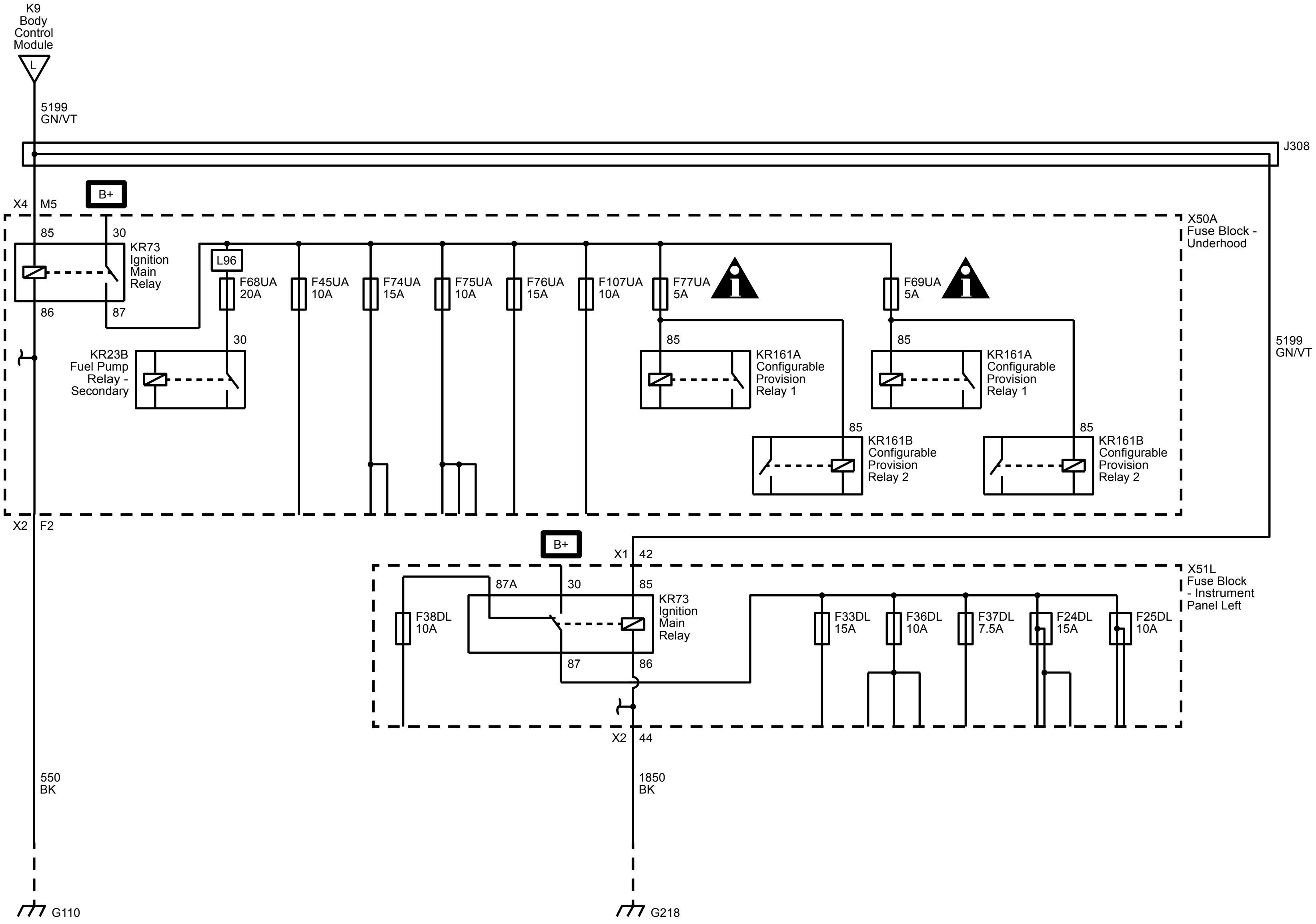
Ignition Mode Switch (BTM)

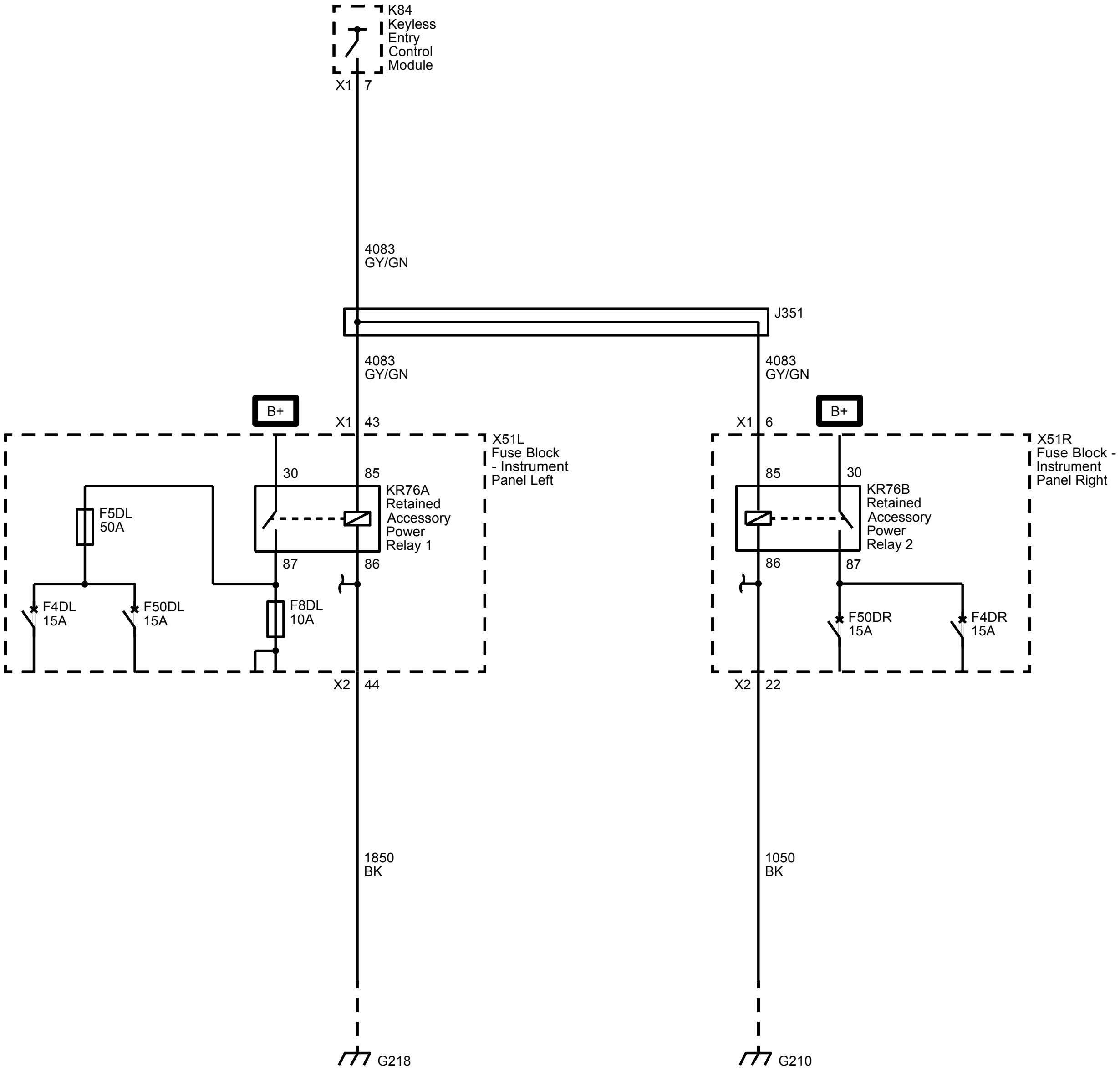

F19DL
II/III
GN
F19DL
I
OG
K9
Body
Control
Module
X1
20
8
X2
17
X4
25
5719
BU/BK
5720
BN/BK
5723
BU/GN
4086
YE/BU
X1
10
K84
Keyless
Entry
Control
Module
X1
11
12
3558
GN/BK
3559
BK/GY
X225
21
13
3558
GN/BK
3559
BK/GY
5
2
6
3
7
S38
Ignition
Mode
Switch
1300 Ω
1300 Ω
3570 Ω
3570 Ω
ENGINE
START/STOP
4
1851
BK/WH
G218

Ignition Switch (without BTM) and Ignition Power

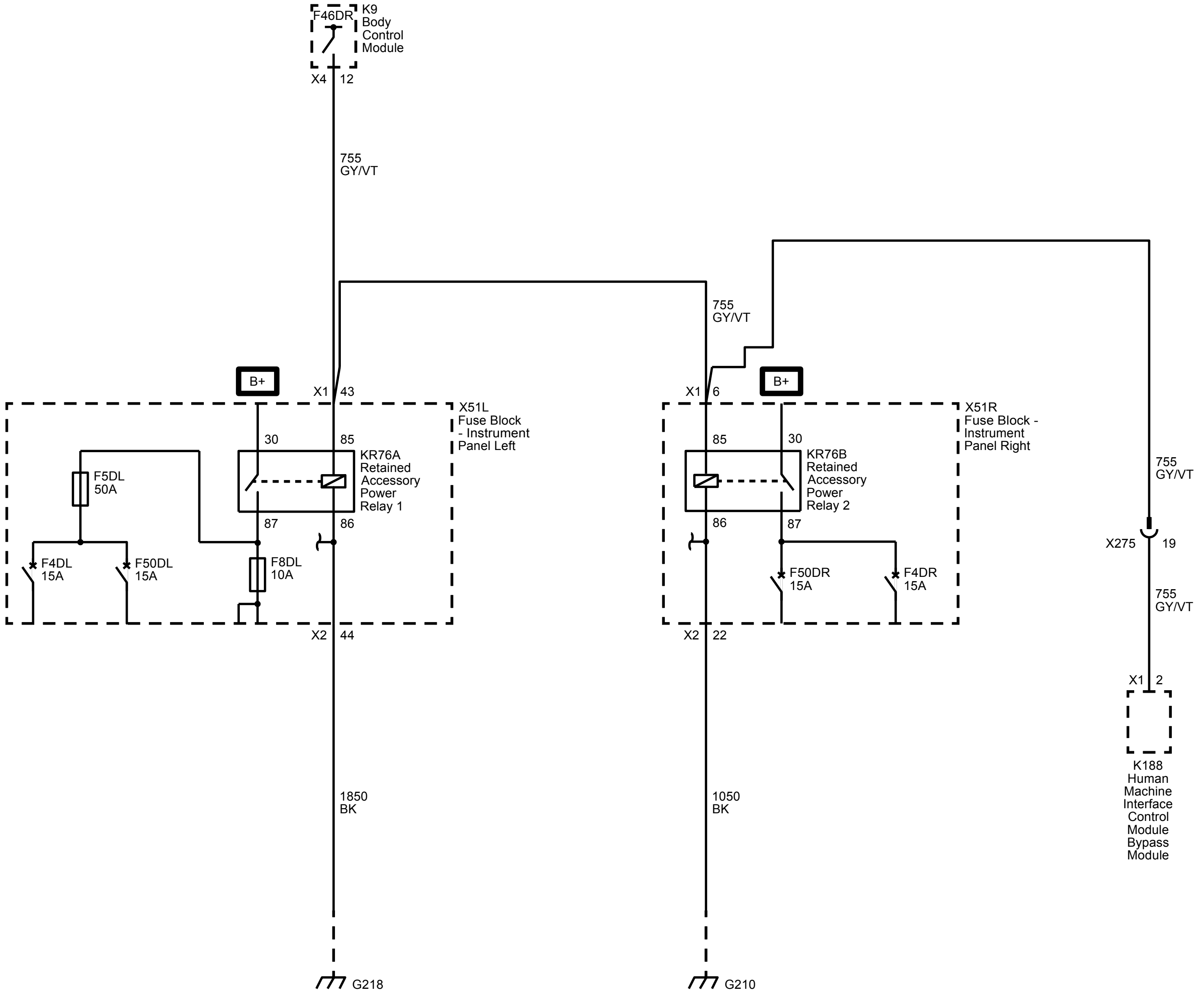

B+
X51L
Fuse Block
- Instrument
Panel Left
F16DL
2A
X2
5
540
RD/BU
-BTM
X201
4
6
540
RD/BU
4
S39
Ignition
Switch
I
II
III
1.3K Ω
5
3
4
VT/YE
2
3
VT/BK
-BTM
1073
WH/BK
1020
WH/VT
K84
Keyless
Entry
Control
Module
X1
13
5
3
VT/BK
4
VT/YE
X225
17
18
X201
3
24
BTM
K9
Body
Control
Module
X3
22
15
5
6
5V
750 Ω
X4
22
15
J309
5985
VT/YE
X185
20
NP0/NQH
JL1/NP0/NQH
-JL1/NP0/NQH
J165
MYC/MYD
M5U
5199
GN/VT
(L96)-(JL1/Z85)
(L83/L86)+(JL1/Z85)
(L83/L86)-(JL1/Z85)
J449
X2
38
X61A
Junction
Block -
Instrument
Panel
X9
7
X2
6
IGN
K69
Transfer
Case
Control
Module
14
K38
Chassis
Control
Module
7
K111
Fuel Pump Driver
Control Module
X115
16
X1
9
Q8
Control
Solenoid
Valve
Assembly
T12
Automatic
Transmission
Assembly
51
K71
Transmission
Control
Module
X1
X1
18 (L96)
70 (L83/L86)
K20
Engine
Control
Module
L
X50A
Fuse Block -
Underhood
L O C
D E S C

Ignition Main Relay

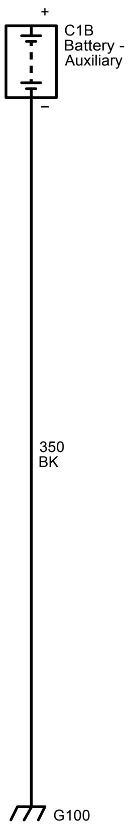

K9
Body
Control
Module
L
5199
GN/VT
J308
X4
M5
B+
85
30
KR73
Ignition
Main
Relay
86
87
X50A
Fuse Block -
Underhood
L96
F68UA
20A
F45UA
10A
F74UA
15A
F75UA
10A
F76UA
15A
F107UA
10A
F77UA
5A
F69UA
5A
30
KR23B
Fuel Pump
Relay -
Secondary
85
KR161A
Configurable
Provision
Relay 1
85
KR161A
Configurable
Provision
Relay 1
85
KR161B
Configurable
Provision
Relay 2
85
KR161B
Configurable
Provision
Relay 2
5199
GN/VT
X2
F2
B+
X1
42
87A
30
85
KR73
Ignition
Main
Relay
87
86
X51L
Fuse Block
- Instrument
Panel Left
F38DL
10A
F33DL
15A
F36DL
10A
F37DL
7.5A
F24DL
15A
F25DL
10A
X2
44
550
BK
1850
BK
G110
G218


K84
Keyless
Entry
Control
Module
X1 7
4083
GY/GN
J351
4083
GY/GN
4083
GY/GN
B+
X1 43
X51L
Fuse Block
- Instrument
Panel Left
30
85
KR76A
Retained
Accessory
Power
Relay 1
F5DL
50A
87
86
F4DL
15A
F50DL
15A
F8DL
10A
X2 44
B+
X1 6
X51R
Fuse Block -
Instrument
Panel Right
85
30
KR76B
Retained
Accessory
Power
Relay 2
86
87
F50DR
15A
F4DR
15A
X2 22
1850
BK
1050
BK
G218
G210

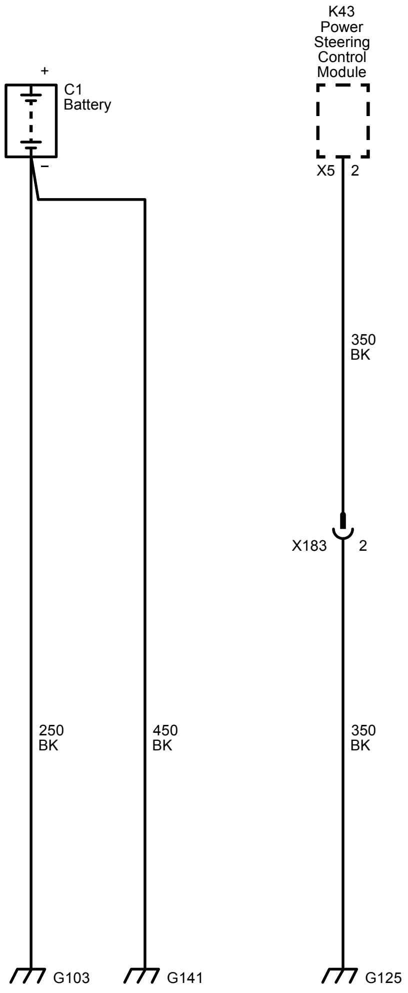
Accessory Power (without BTM)


F46DR
K9
Body
Control
Module
X4
12
755
GY/VT
755
GY/VT
B+
X1
43
X51L
Fuse Block
- Instrument
Panel Left
30
85
KR76A
Retained
Accessory
Power
Relay 1
F5DL
50A
87
86
F4DL
15A
F50DL
15A
F8DL
10A
X2
44
1850
BK
G218
X1
6
B+
X51R
Fuse Block -
Instrument
Panel Right
85
30
KR76B
Retained
Accessory
Power
Relay 2
86
87
F50DR
15A
F4DR
15A
X2
22
1050
BK
G210
755
GY/VT
X275
19
755
GY/VT
X1
2
K188
Human
Machine
Interface
Control
Module
Bypass
Module

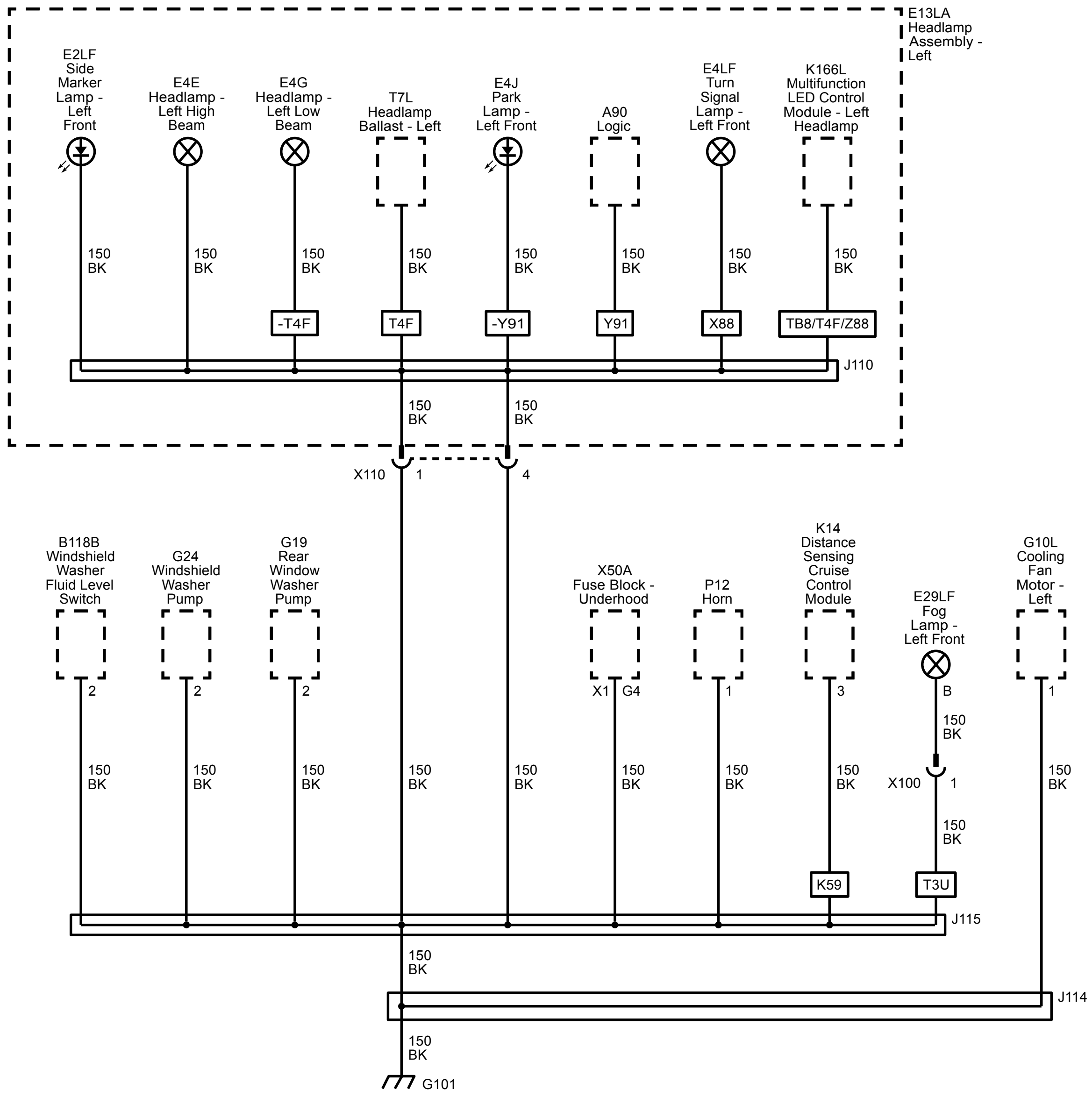
G100 (5W4, 9C1 or L96)


+
C1B
Battery -
Auxiliary
–
350
BK
G100

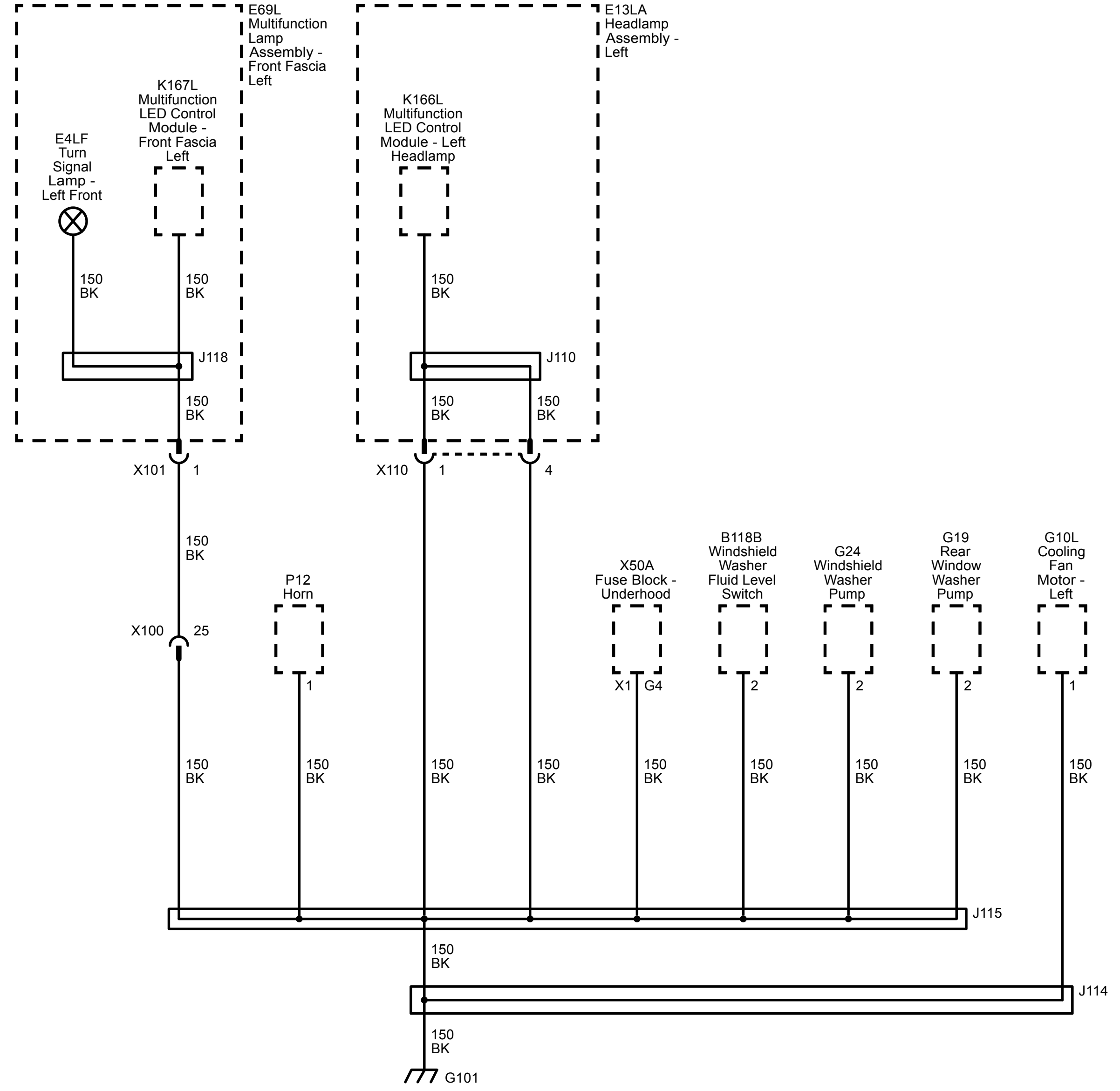
G103, G125 and G141 (L83 or L86)


+
C1
Battery
−
K43
Power
Steering
Control
Module
X5
2
350
BK
X183
2
350
BK
250
BK
450
BK
G103
G141
G125

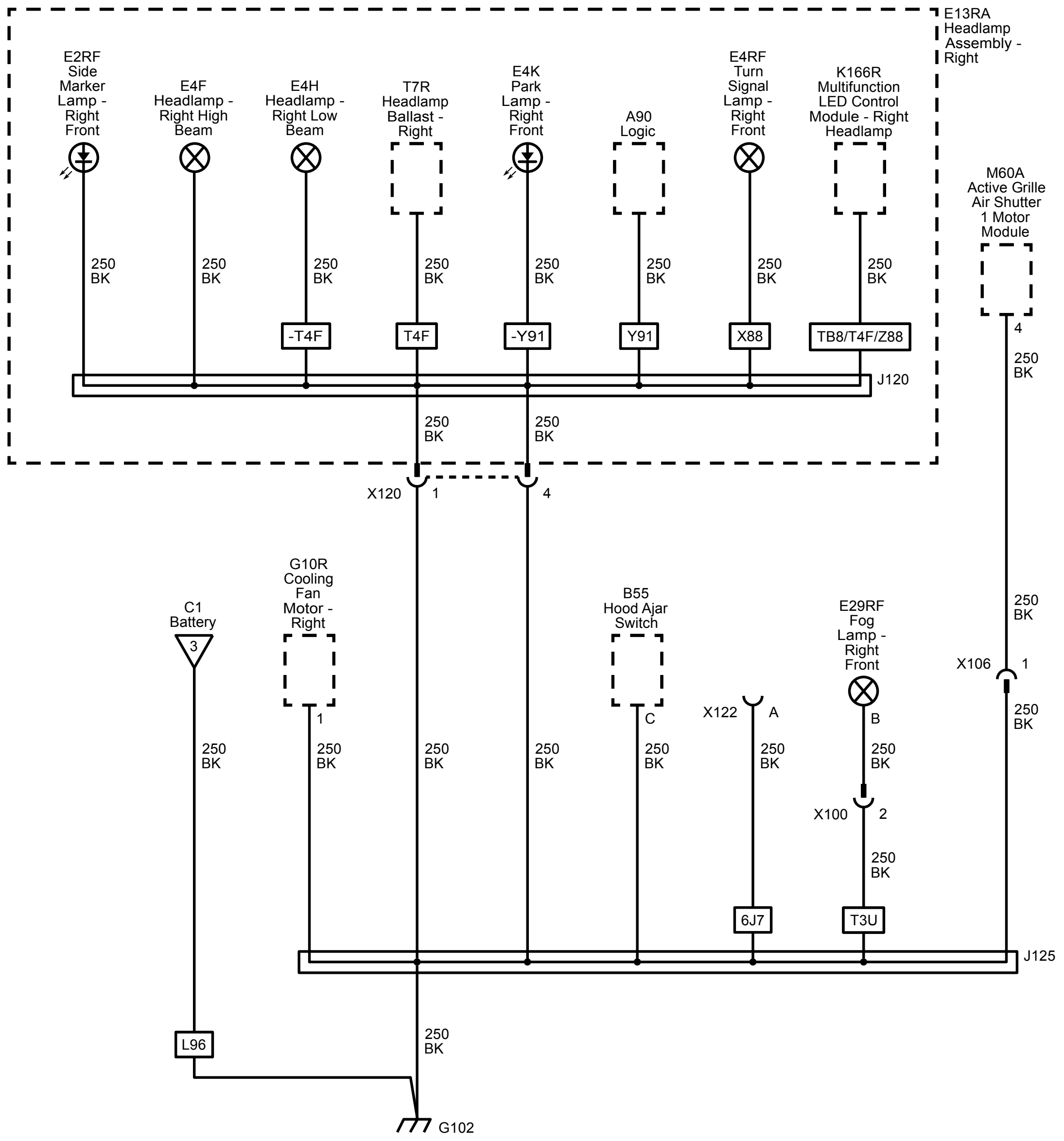
G101 (X88 or Z88)


E13LA Headlamp Assembly - Left
E2LF Side Marker Lamp - Left Front
E4E Headlamp - Left High Beam
E4G Headlamp - Left Low Beam
T7L Headlamp Ballast - Left
E4J Park Lamp - Left Front
A90 Logic
E4LF Turn Signal Lamp - Left Front
K166L Multifunction LED Control Module - Left Headlamp
150 BK
-T4F
T4F
-Y91
Y91
X88
TB8/T4F/Z88
J110
X110
1
4
B118B Windshield Washer Fluid Level Switch
G24 Windshield Washer Pump
G19 Rear Window Washer Pump
X50A Fuse Block - Underhood
P12 Horn
K14 Distance Sensing Cruise Control Module
E29LF Fog Lamp - Left Front
G10L Cooling Fan Motor - Left
2
2
2
X1
G4
1
3
B
1
X100
1
K59
T3U
J115
J114
G101

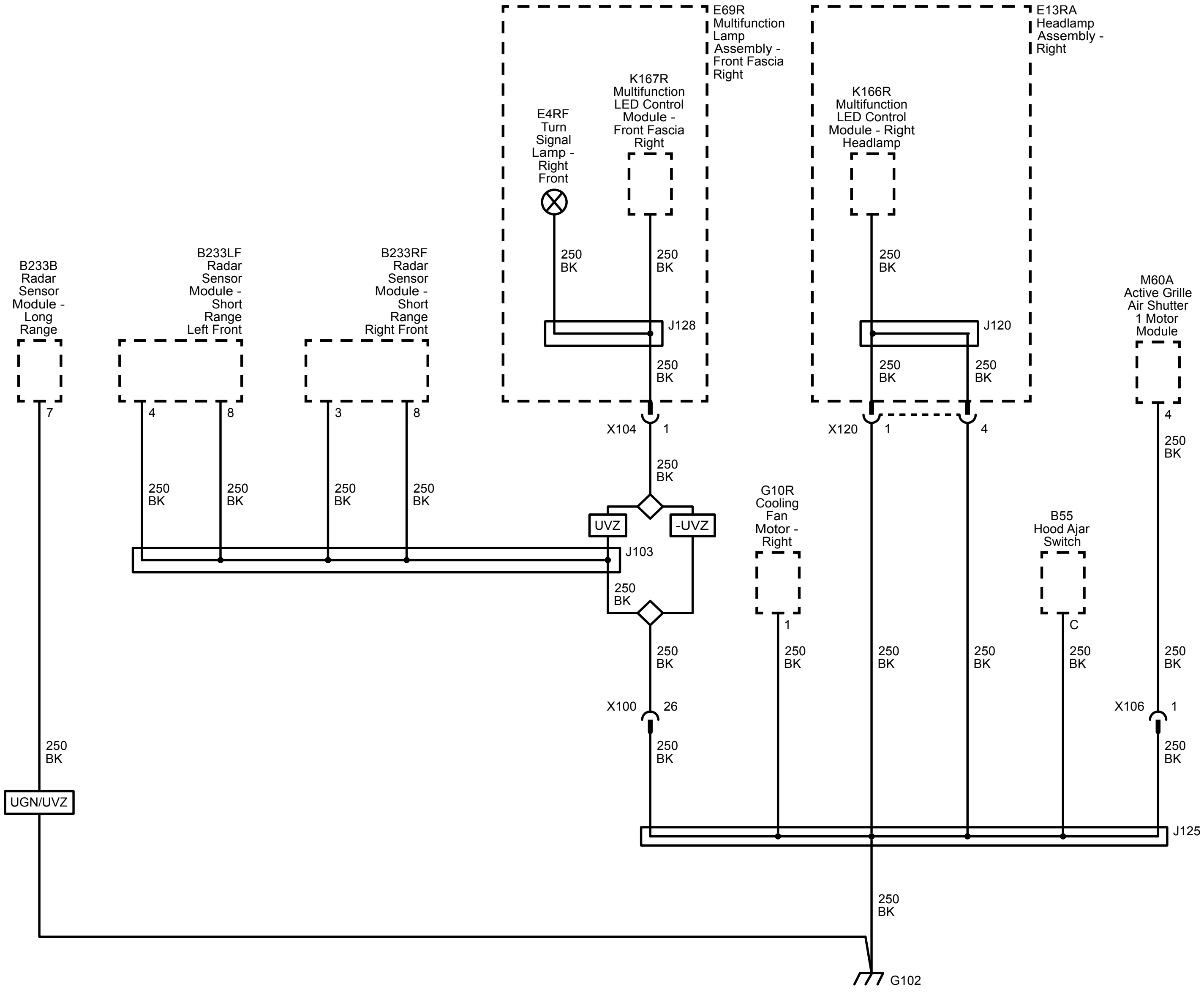
G101 (Z75)


E69L Multifunction Lamp Assembly - Front Fascia Left
K167L Multifunction LED Control Module - Front Fascia Left
E4LF Turn Signal Lamp - Left Front
E13LA Headlamp Assembly - Left
K166L Multifunction LED Control Module - Left Headlamp
150 BK
J118
J110
X101 1
X110 1 4
X100 25
P12 Horn
1
X50A Fuse Block - Underhood
X1 G4
B118B Windshield Washer Fluid Level Switch
2
G24 Windshield Washer Pump
2
G19 Rear Window Washer Pump
2
G10L Cooling Fan Motor - Left
1
J115
J114
G101

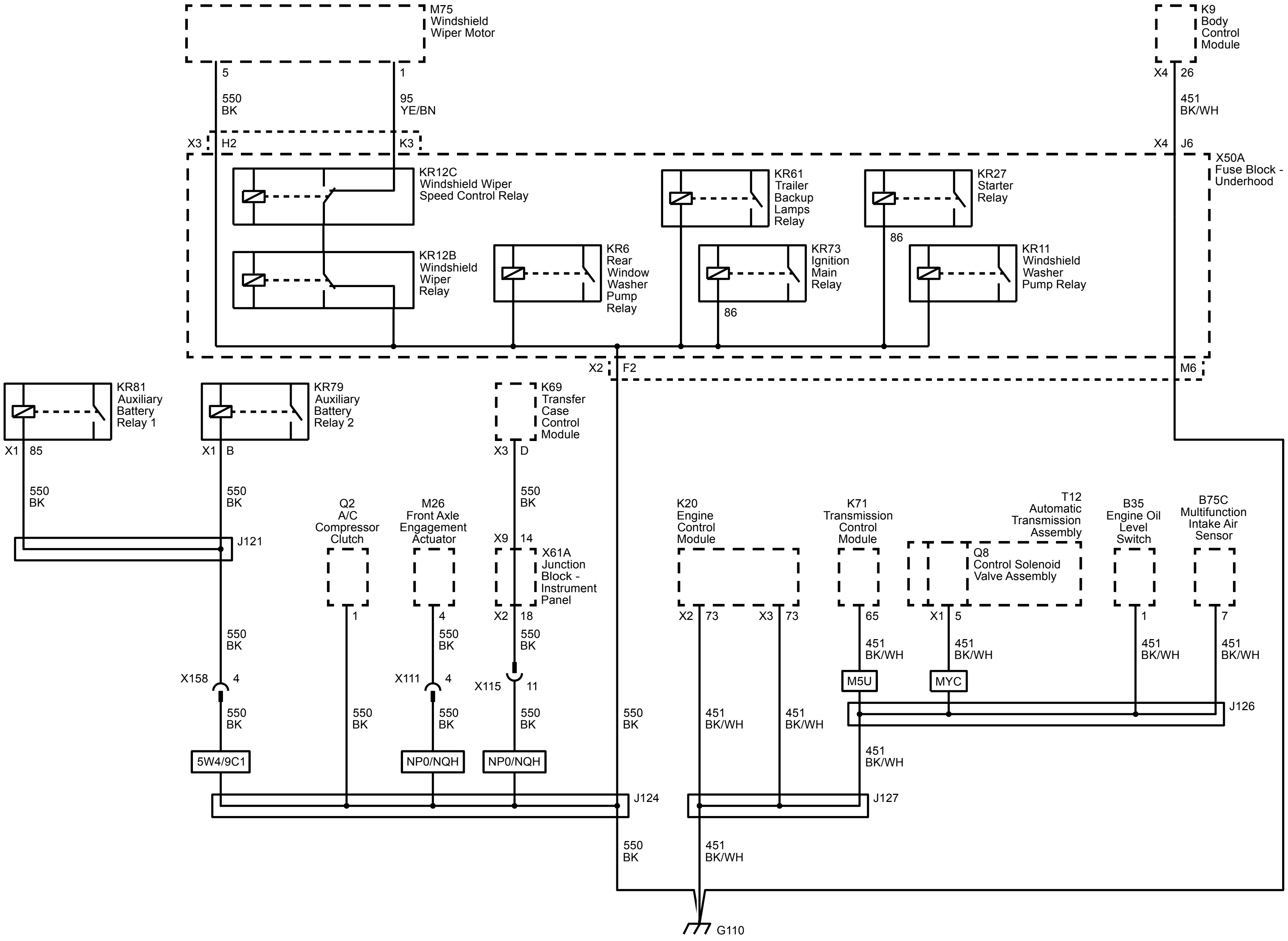
G102 (X88 or Z88)


E13RA Headlamp Assembly - Right
E2RF Side Marker Lamp - Right Front
E4F Headlamp - Right High Beam
E4H Headlamp - Right Low Beam
T7R Headlamp Ballast - Right
E4K Park Lamp - Right Front
A90 Logic
E4RF Turn Signal Lamp - Right Front
K166R Multifunction LED Control Module - Right Headlamp
250 BK
-T4F
T4F
-Y91
Y91
X88
TB8/T4F/Z88
J120
X120
1
4
M60A Active Grille Air Shutter 1 Motor Module
4
X106
1
C1 Battery
3
G10R Cooling Fan Motor - Right
1
B55 Hood Ajar Switch
C
X122
A
E29RF Fog Lamp - Right Front
B
X100
2
6J7
T3U
J125
L96
G102

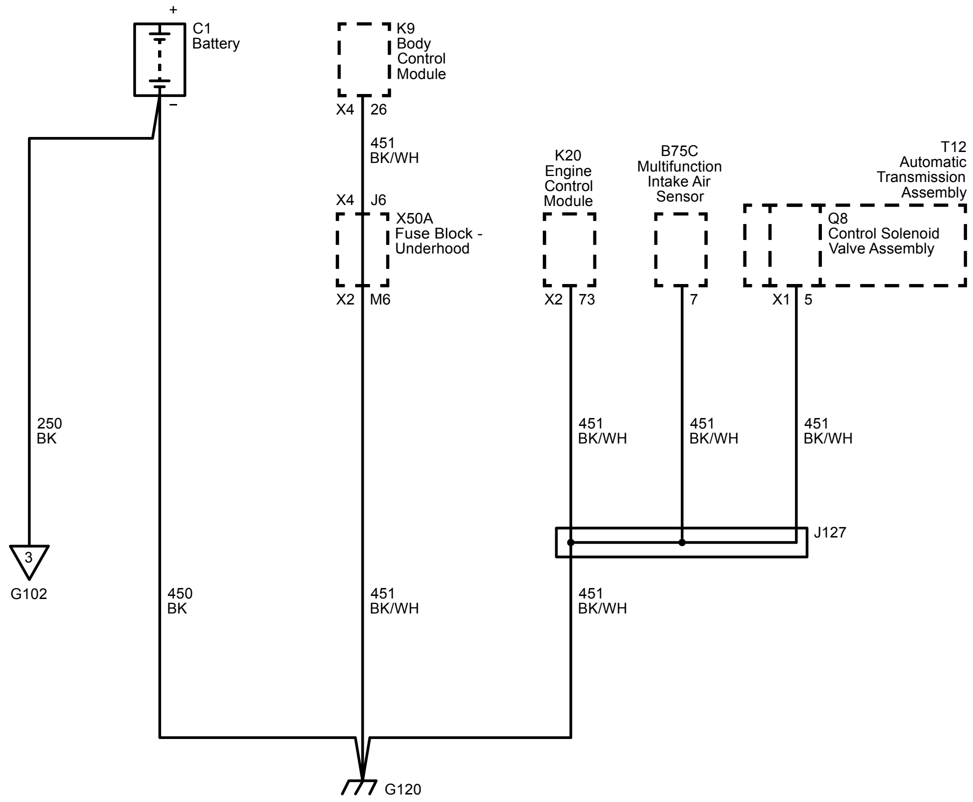
G102 (Z75)


E69R Multifunction Lamp Assembly - Front Fascia Right
E13RA Headlamp Assembly - Right
K167R Multifunction LED Control Module - Front Fascia Right
E4RF Turn Signal Lamp - Right Front
K166R Multifunction LED Control Module - Right Headlamp
B233B Radar Sensor Module - Long Range
B233LF Radar Sensor Module - Short Range Left Front
B233RF Radar Sensor Module - Short Range Right Front
M60A Active Grille Air Shutter 1 Motor Module
G10R Cooling Fan Motor - Right
B55 Hood Ajar Switch
250 BK
J128
J120
X104 1
X120 1
4
7
4
8
3
8
UVZ
-UVZ
J103
X100 26
X106 1
C
UGN/UVZ
J125
G102

G110 (L83 or L86)

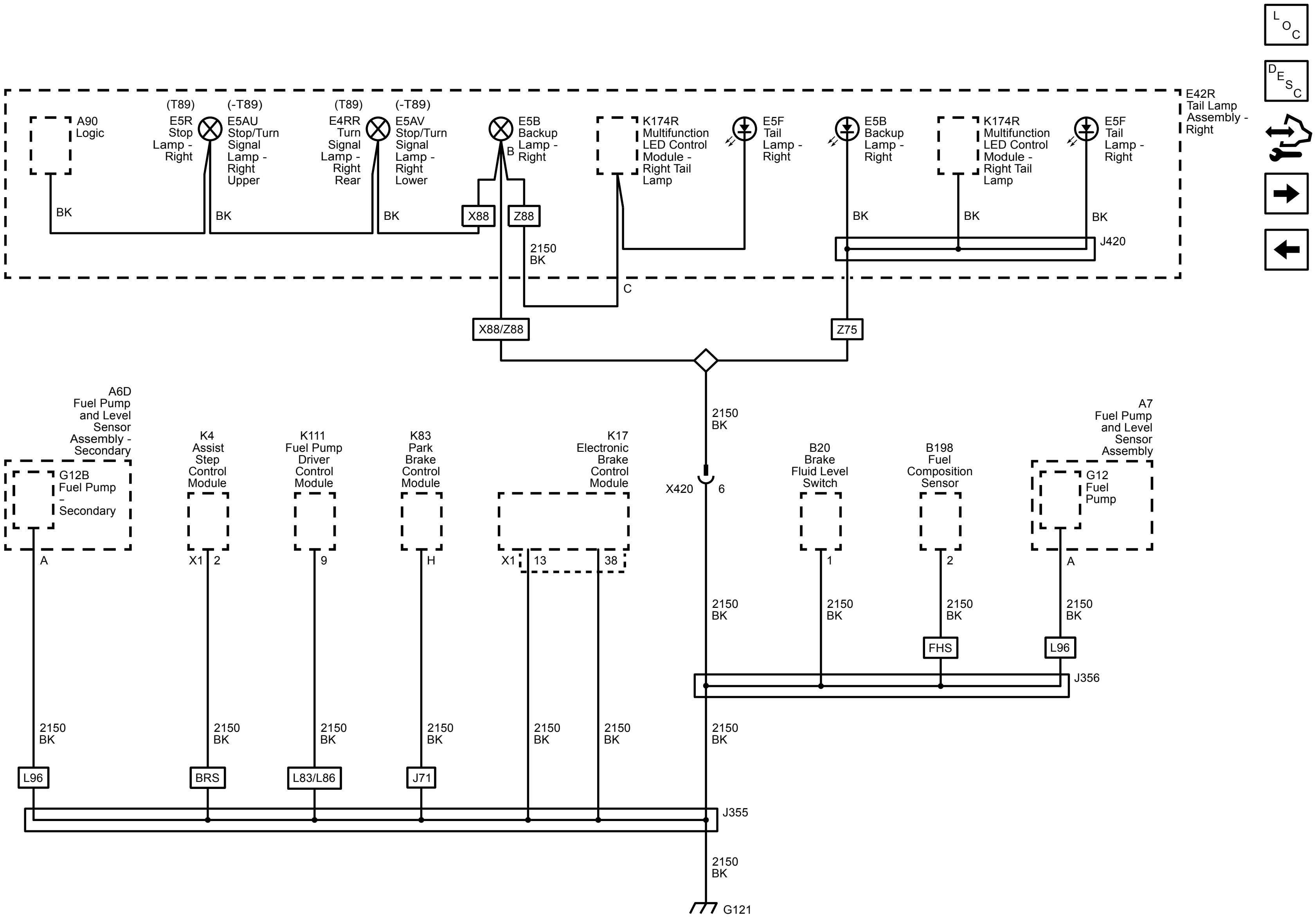

M75
Windshield
Wiper Motor
5
1
550
BK
95
YE/BN
K9
Body
Control
Module
X4
26
451
BK/WH
X3
H2
K3
X4
J6
X50A
Fuse Block -
Underhood
KR12C
Windshield Wiper
Speed Control Relay
KR61
Trailer
Backup
Lamps
Relay
KR27
Starter
Relay
86
KR12B
Windshield
Wiper
Relay
KR6
Rear
Window
Washer
Pump
Relay
KR73
Ignition
Main
Relay
86
KR11
Windshield
Washer
Pump Relay
X2
F2
M6
KR81
Auxiliary
Battery
Relay 1
X1
85
KR79
Auxiliary
Battery
Relay 2
X1
B
K69
Transfer
Case
Control
Module
X3
D
550
BK
550
BK
550
BK
J121
Q2
A/C
Compressor
Clutch
M26
Front Axle
Engagement
Actuator
X9
14
X61A
Junction
Block -
Instrument
Panel
X2
18
K20
Engine
Control
Module
K71
Transmission
Control
Module
T12
Automatic
Transmission
Assembly
Q8
Control Solenoid
Valve Assembly
B35
Engine Oil
Level
Switch
B75C
Multifunction
Intake Air
Sensor
1
4
X2
73
X3
73
65
X1
5
1
7
550
BK
550
BK
550
BK
451
BK/WH
451
BK/WH
451
BK/WH
451
BK/WH
451
BK/WH
X158
4
X111
4
X115
11
M5U
MYC
J126
550
BK
550
BK
550
BK
550
BK
550
BK
451
BK/WH
451
BK/WH
451
BK/WH
5W4/9C1
NP0/NQH
NP0/NQH
J124
J127
550
BK
451
BK/WH
G110

G120 (L96)

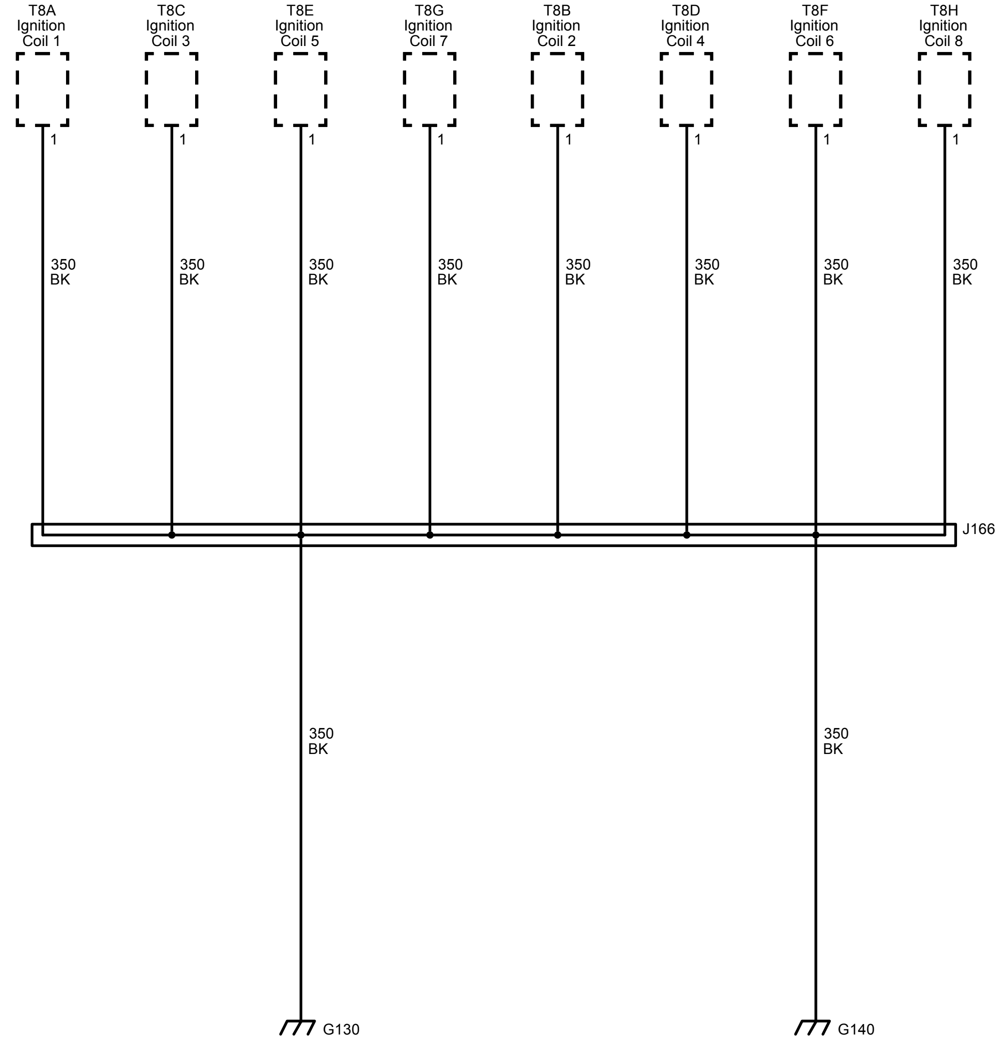


+
C1
Battery
−
K9
Body
Control
Module
X4 26
451
BK/WH
X4 J6
X50A
Fuse Block -
Underhood
X2 M6
K20
Engine
Control
Module
X2 73
B75C
Multifunction
Intake Air
Sensor
7
T12
Automatic
Transmission
Assembly
Q8
Control Solenoid
Valve Assembly
X1 5
250
BK
451
BK/WH
451
BK/WH
451
BK/WH
J127
3
G102
450
BK
451
BK/WH
451
BK/WH
G120

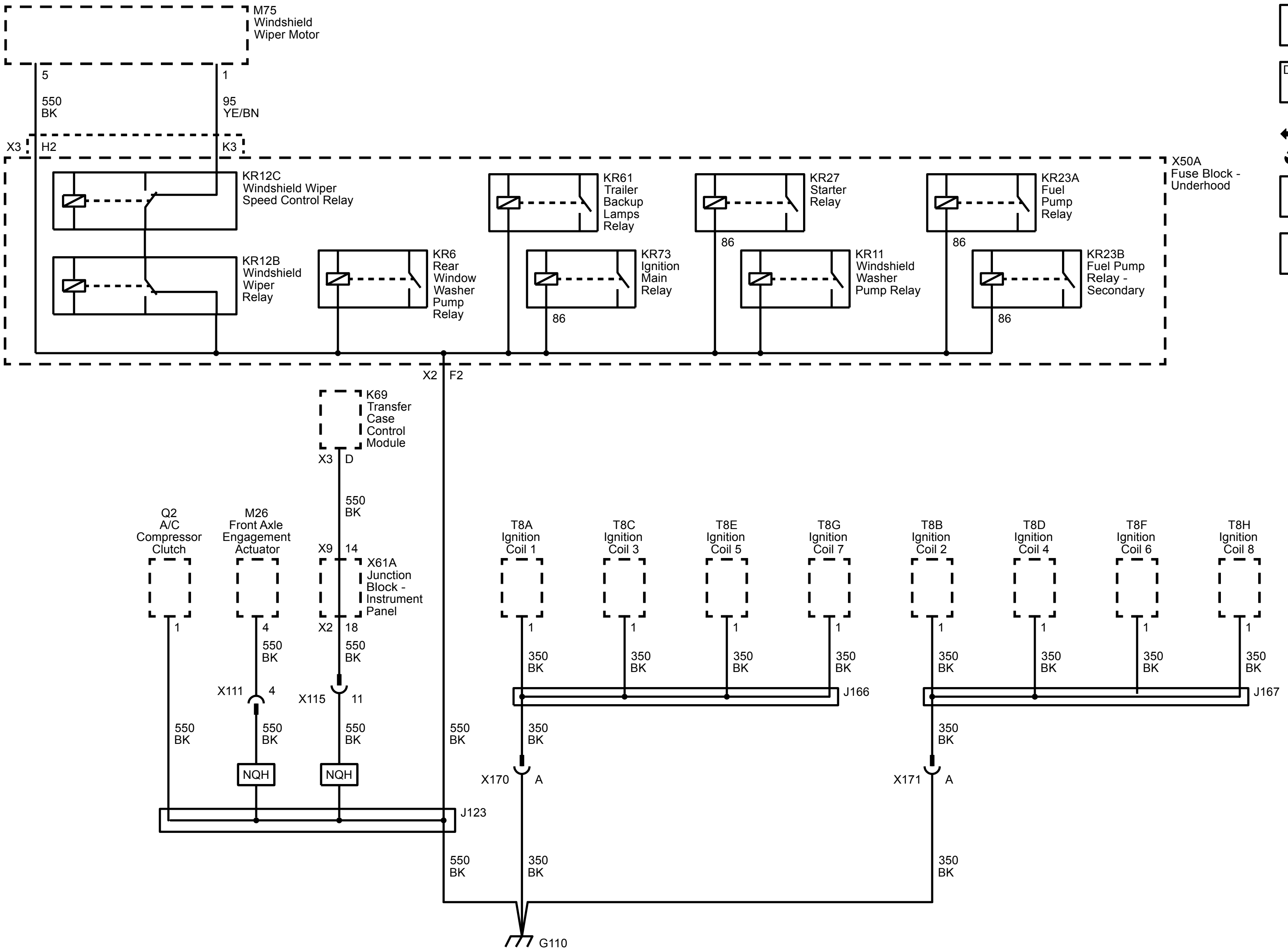
G121


LOC
DESC
E42R Tail Lamp Assembly - Right
A90 Logic
(T89) E5R Stop Lamp - Right
(-T89) E5AU Stop/Turn Signal Lamp - Right Upper
(T89) E4RR Turn Signal Lamp - Right Rear
(-T89) E5AV Stop/Turn Signal Lamp - Right Lower
E5B Backup Lamp - Right
B
K174R Multifunction LED Control Module - Right Tail Lamp
E5F Tail Lamp - Right
E5B Backup Lamp - Right
K174R Multifunction LED Control Module - Right Tail Lamp
E5F Tail Lamp - Right
BK
BK
BK
X88
Z88
2150 BK
C
BK
BK
BK
J420
X88/Z88
Z75
2150 BK
X420
6
A6D Fuel Pump and Level Sensor Assembly - Secondary
G12B Fuel Pump - Secondary
K4 Assist Step Control Module
K111 Fuel Pump Driver Control Module
K83 Park Brake Control Module
K17 Electronic Brake Control Module
B20 Brake Fluid Level Switch
B198 Fuel Composition Sensor
A7 Fuel Pump and Level Sensor Assembly
G12 Fuel Pump
A
X1 2
9
H
X1 13
38
1
2
A
2150 BK
2150 BK
2150 BK
2150 BK
FHS
L96
J356
2150 BK
2150 BK
2150 BK
2150 BK
2150 BK
2150 BK
2150 BK
L96
BRS
L83/L86
J71
J355
2150 BK
G121

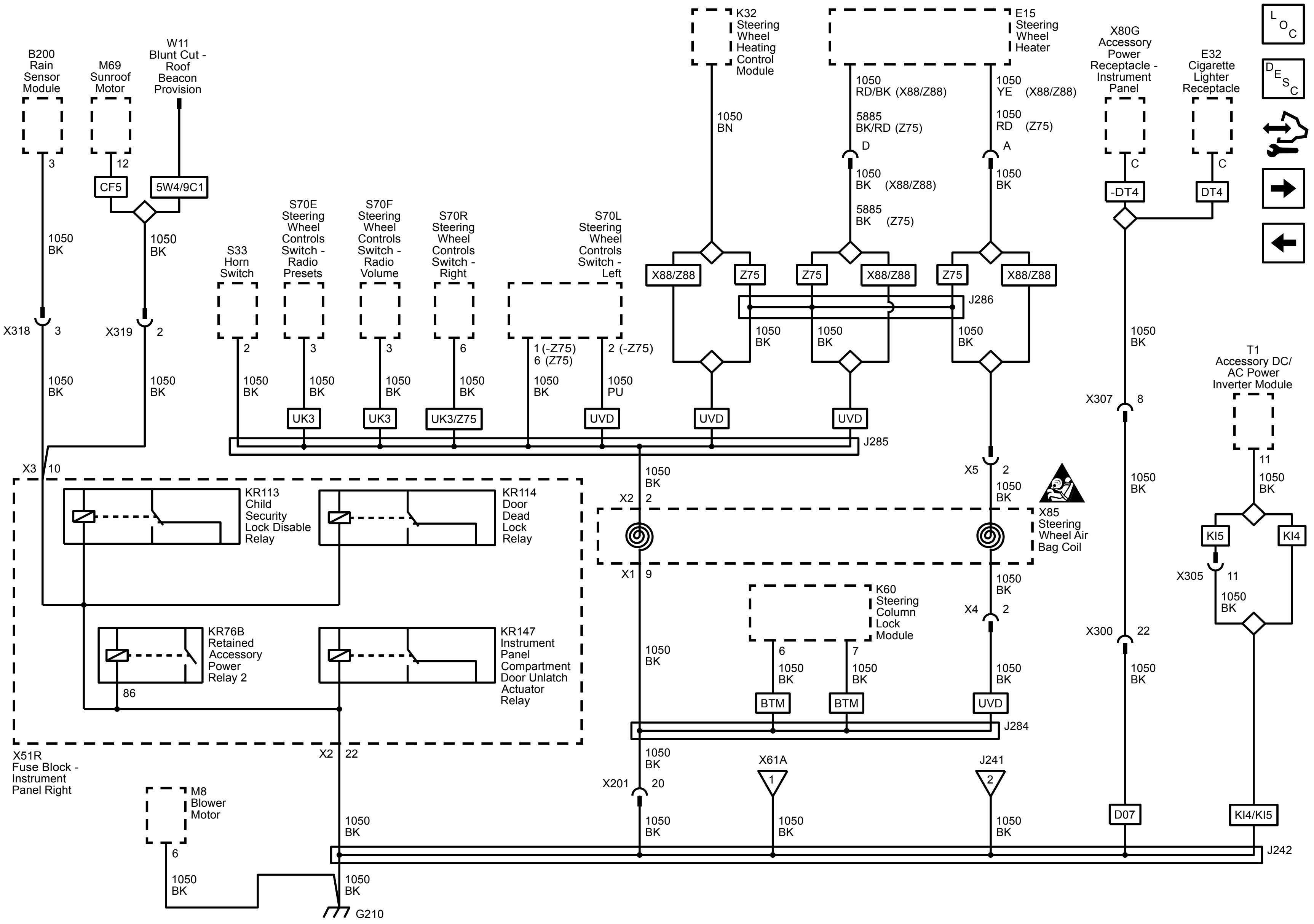
G130 and G140 (L83 or L86)

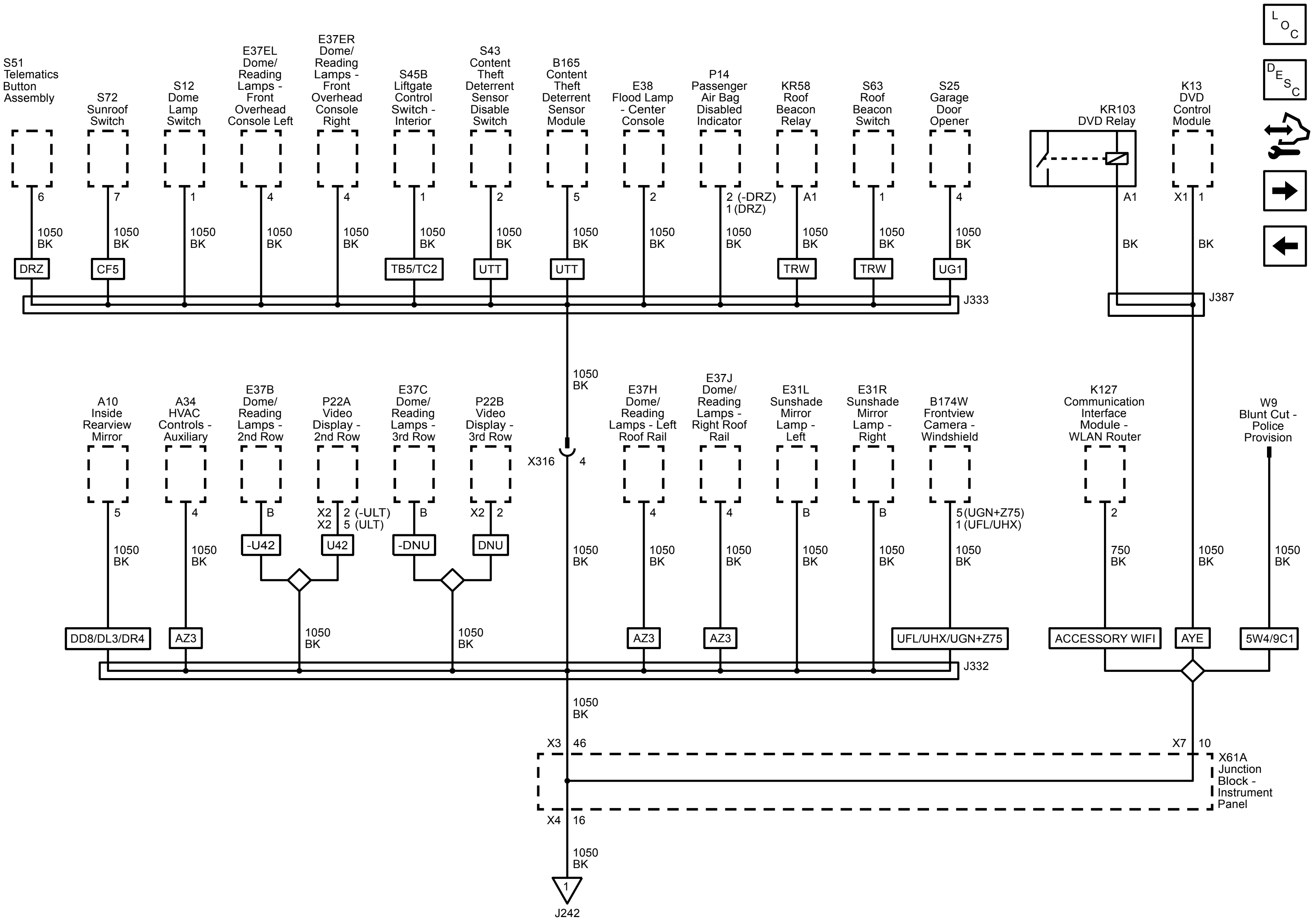

T8A Ignition Coil 1
T8C Ignition Coil 3
T8E Ignition Coil 5
T8G Ignition Coil 7
T8B Ignition Coil 2
T8D Ignition Coil 4
T8F Ignition Coil 6
T8H Ignition Coil 8
1
1
1
1
1
1
1
1
350 BK
350 BK
350 BK
350 BK
350 BK
350 BK
350 BK
350 BK
J166
350 BK
350 BK
G130
G140

G110 (L96)

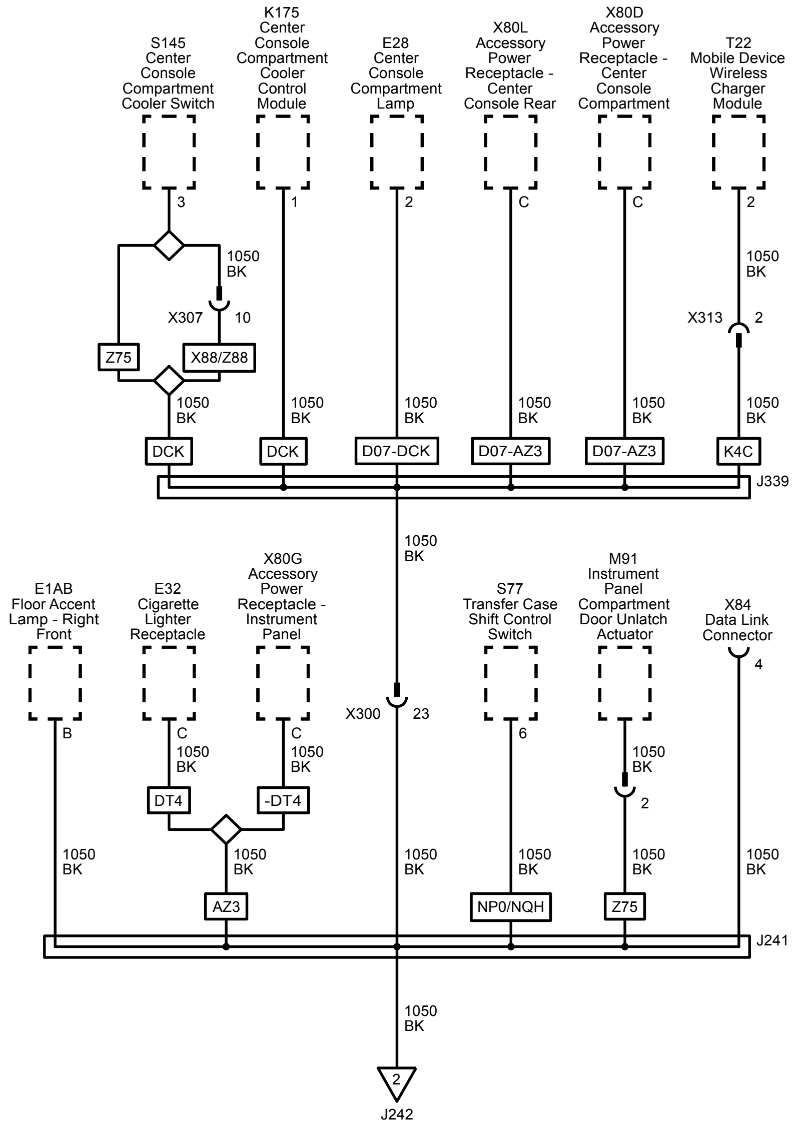

M75
Windshield
Wiper Motor
5
1
550
BK
95
YE/BN
X3
H2
K3
X50A
Fuse Block -
Underhood
KR12C
Windshield Wiper
Speed Control Relay
KR12B
Windshield
Wiper
Relay
KR6
Rear
Window
Washer
Pump
Relay
KR61
Trailer
Backup
Lamps
Relay
KR73
Ignition
Main
Relay
86
KR27
Starter
Relay
86
KR11
Windshield
Washer
Pump Relay
KR23A
Fuel
Pump
Relay
86
KR23B
Fuel Pump
Relay -
Secondary
86
X2
F2
K69
Transfer
Case
Control
Module
X3
D
550
BK
Q2
A/C
Compressor
Clutch
M26
Front Axle
Engagement
Actuator
X9
14
X61A
Junction
Block -
Instrument
Panel
X2
18
1
4
550
BK
550
BK
X111
4
X115
11
550
BK
550
BK
550
BK
550
BK
NQH
NQH
J123
550
BK
T8A
Ignition
Coil 1
T8C
Ignition
Coil 3
T8E
Ignition
Coil 5
T8G
Ignition
Coil 7
T8B
Ignition
Coil 2
T8D
Ignition
Coil 4
T8F
Ignition
Coil 6
T8H
Ignition
Coil 8
1
1
1
1
1
1
1
1
350
BK
350
BK
350
BK
350
BK
350
BK
350
BK
350
BK
350
BK
J166
J167
350
BK
350
BK
X170
A
X171
A
350
BK
350
BK
G110

G210 (1 of 3)

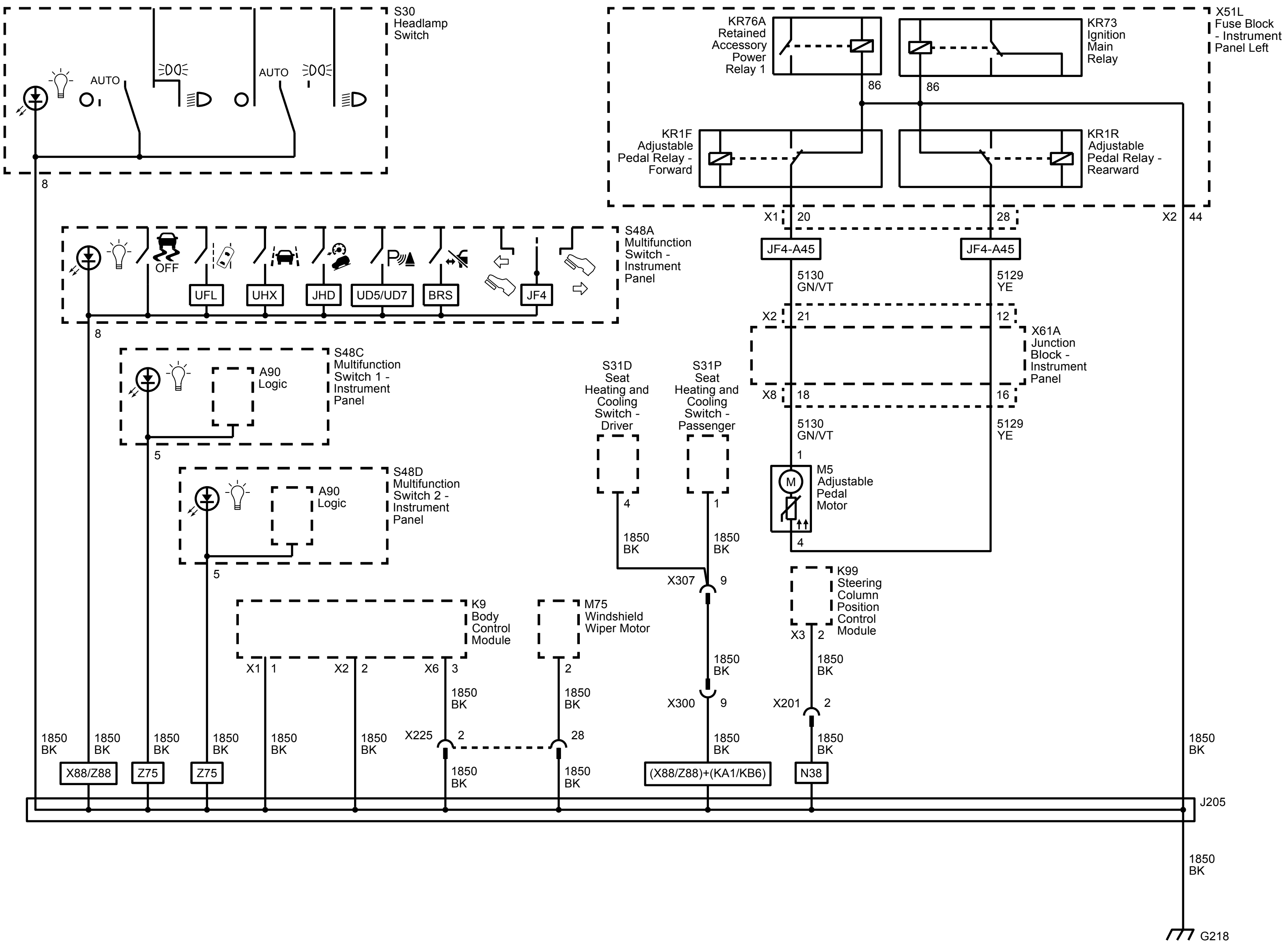

B200 Rain Sensor Module
M69 Sunroof Motor
W11 Blunt Cut - Roof Beacon Provision
3
12
CF5
5W4/9C1
1050 BK
1050 BK
X318 3
X319 2
1050 BK
1050 BK
S33 Horn Switch
S70E Steering Wheel Controls Switch - Radio Presets
S70F Steering Wheel Controls Switch - Radio Volume
S70R Steering Wheel Controls Switch - Right
S70L Steering Wheel Controls Switch - Left
2
3
3
6
1 (-Z75) 6 (Z75)
2 (-Z75)
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
1050 PU
UK3
UK3
UK3/Z75
UVD
UVD
UVD
J285
K32 Steering Wheel Heating Control Module
1050 BN
E15 Steering Wheel Heater
1050 RD/BK (X88/Z88)
5885 BK/RD (Z75)
D
1050 BK (X88/Z88)
5885 BK (Z75)
1050 YE (X88/Z88)
1050 RD (Z75)
A
1050 BK
X88/Z88
Z75
Z75
X88/Z88
Z75
X88/Z88
J286
1050 BK
1050 BK
1050 BK
X3 10
X51R Fuse Block - Instrument Panel Right
KR113 Child Security Lock Disable Relay
KR114 Door Dead Lock Relay
KR76B Retained Accessory Power Relay 2
86
KR147 Instrument Panel Compartment Door Unlatch Actuator Relay
X2 22
1050 BK
X2 2
X1 9
X5 2
1050 BK
X85 Steering Wheel Air Bag Coil
1050 BK
X4 2
1050 BK
1050 BK
K60 Steering Column Lock Module
6
7
1050 BK
1050 BK
BTM
BTM
UVD
J284
1050 BK
X201 20
1050 BK
X61A
1
J241
2
1050 BK
1050 BK
1050 BK
J242
M8 Blower Motor
6
1050 BK
1050 BK
G210
X80G Accessory Power Receptacle - Instrument Panel
E32 Cigarette Lighter Receptacle
C
C
-DT4
DT4
1050 BK
X307 8
1050 BK
X300 22
1050 BK
D07
T1 Accessory DC/ AC Power Inverter Module
11
1050 BK
KI5
KI4
X305 11
1050 BK
KI4/KI5
LOC
DESC


S51 Telematics Button Assembly
S72 Sunroof Switch
S12 Dome Lamp Switch
E37EL Dome/ Reading Lamps - Front Overhead Console Left
E37ER Dome/ Reading Lamps - Front Overhead Console Right
S45B Liftgate Control Switch - Interior
S43 Content Theft Deterrent Sensor Disable Switch
B165 Content Theft Deterrent Sensor Module
E38 Flood Lamp - Center Console
P14 Passenger Air Bag Disabled Indicator
KR58 Roof Beacon Relay
S63 Roof Beacon Switch
S25 Garage Door Opener
KR103 DVD Relay
K13 DVD Control Module
6
7
1
4
4
1
2
5
2
2 (-DRZ)
1 (DRZ)
A1
1
4
A1
X1 1
1050 BK
BK
DRZ
CF5
TB5/TC2
UTT
UTT
TRW
TRW
UG1
J333
J387
X316
4
A10 Inside Rearview Mirror
A34 HVAC Controls - Auxiliary
E37B Dome/ Reading Lamps - 2nd Row
P22A Video Display - 2nd Row
E37C Dome/ Reading Lamps - 3rd Row
P22B Video Display - 3rd Row
E37H Dome/ Reading Lamps - Left Roof Rail
E37J Dome/ Reading Lamps - Right Roof Rail
E31L Sunshade Mirror Lamp - Left
E31R Sunshade Mirror Lamp - Right
B174W Frontview Camera - Windshield
K127 Communication Interface Module - WLAN Router
W9 Blunt Cut - Police Provision
5
4
B
X2 2 (-ULT)
X2 5 (ULT)
B
X2 2
4
4
B
B
5(UGN+Z75)
1 (UFL/UHX)
2
750 BK
-U42
U42
-DNU
DNU
DD8/DL3/DR4
AZ3
AZ3
AZ3
UFL/UHX/UGN+Z75
ACCESSORY WIFI
AYE
5W4/9C1
J332
X3 46
X7 10
X61A Junction Block - Instrument Panel
X4 16
1
J242
LOC
DESC

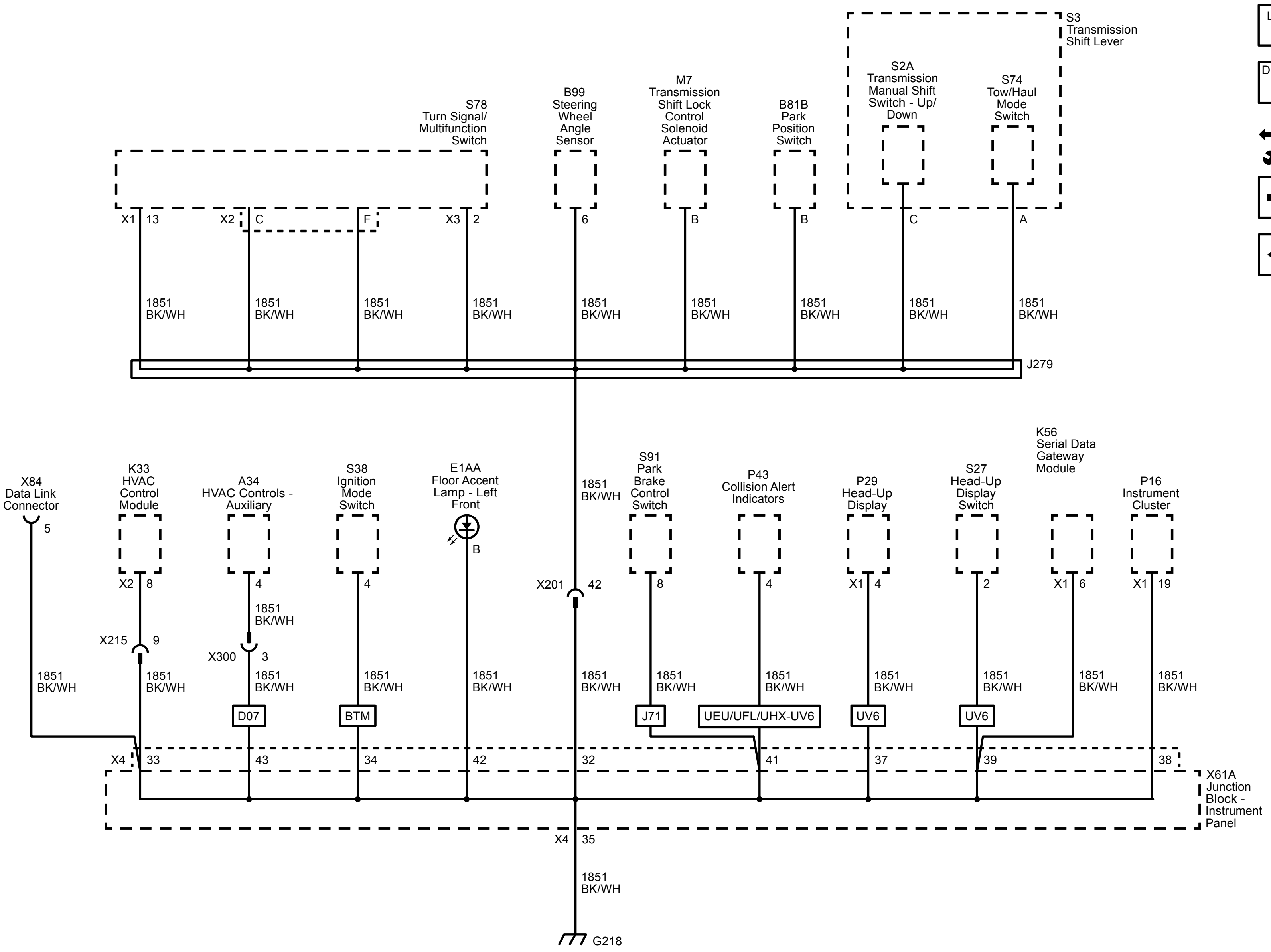
G210 (3 of 3)


S145 Center Console Compartment Cooler Switch
K175 Center Console Compartment Cooler Control Module
E28 Center Console Compartment Lamp
X80L Accessory Power Receptacle - Center Console Rear
X80D Accessory Power Receptacle - Center Console Compartment
T22 Mobile Device Wireless Charger Module
3
1
2
C
C
2
1050 BK
X307
10
Z75
X88/Z88
1050 BK
X313
2
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
DCK
DCK
D07-DCK
D07-AZ3
D07-AZ3
K4C
J339
1050 BK
E1AB Floor Accent Lamp - Right Front
E32 Cigarette Lighter Receptacle
X80G Accessory Power Receptacle - Instrument Panel
S77 Transfer Case Shift Control Switch
M91 Instrument Panel Compartment Door Unlatch Actuator
X84 Data Link Connector
4
X300
23
B
C
C
6
1050 BK
1050 BK
1050 BK
2
DT4
-DT4
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
1050 BK
AZ3
NP0/NQH
Z75
J241
1050 BK
2
J242

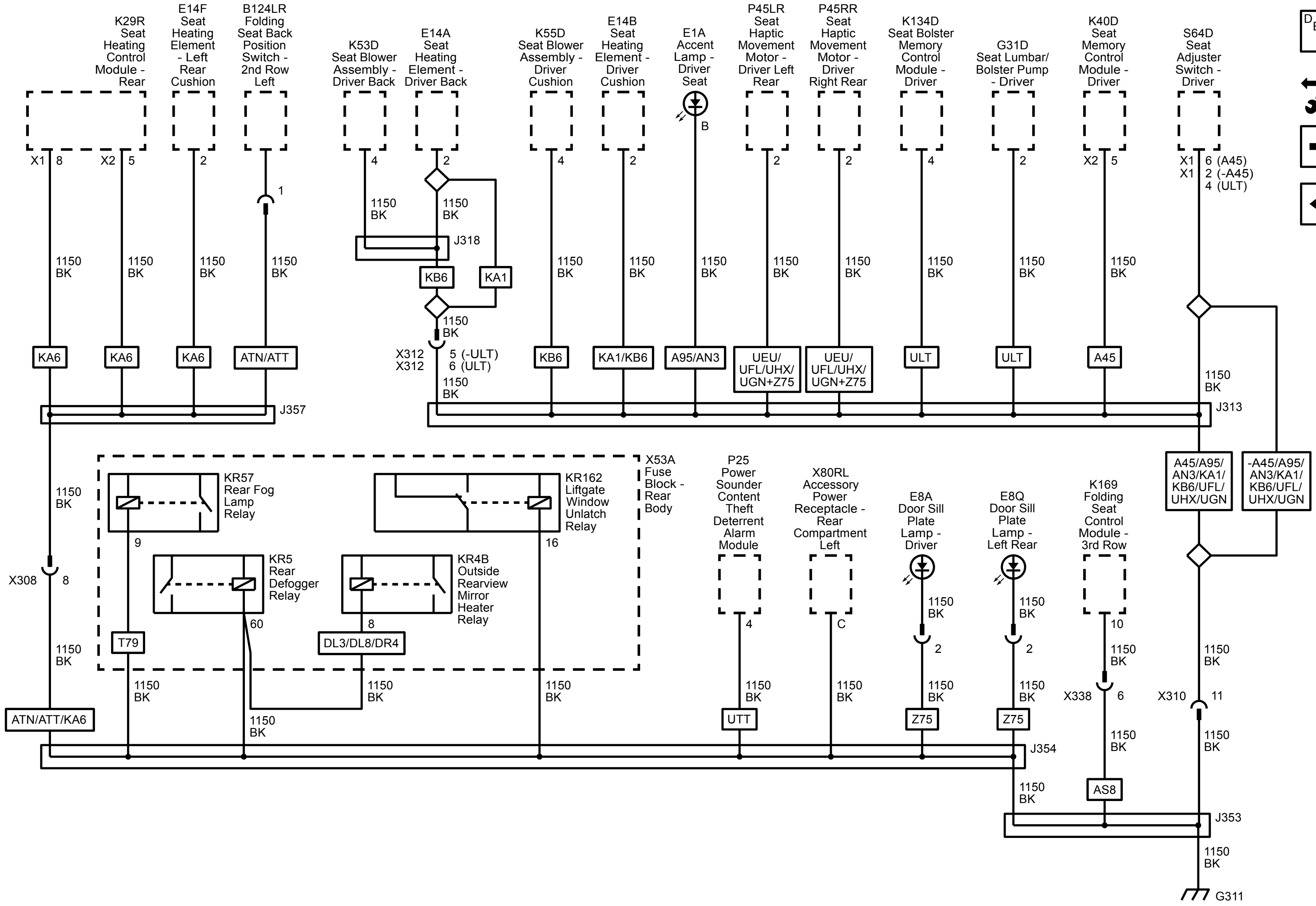
G218 (1 of 2)


S30
Headlamp
Switch
AUTO
AUTO
8
KR76A
Retained
Accessory
Power
Relay 1
86
KR73
Ignition
Main
Relay
86
X51L
Fuse Block
- Instrument
Panel Left
KR1F
Adjustable
Pedal Relay -
Forward
KR1R
Adjustable
Pedal Relay -
Rearward
X1
20
28
X2
44
JF4-A45
JF4-A45
5130
GN/VT
5129
YE
S48A
Multifunction
Switch -
Instrument
Panel
OFF
UFL
UHX
JHD
UD5/UD7
BRS
JF4
8
X2
21
12
X61A
Junction
Block -
Instrument
Panel
X8
18
16
5130
GN/VT
5129
YE
S48C
Multifunction
Switch 1 -
Instrument
Panel
A90
Logic
5
S31D
Seat
Heating and
Cooling
Switch -
Driver
S31P
Seat
Heating and
Cooling
Switch -
Passenger
1
M5
Adjustable
Pedal
Motor
M
4
S48D
Multifunction
Switch 2 -
Instrument
Panel
A90
Logic
5
4
1
1850
BK
1850
BK
X307
9
K99
Steering
Column
Position
Control
Module
K9
Body
Control
Module
M75
Windshield
Wiper Motor
X3
2
X1
1
X2
2
X6
3
2
1850
BK
1850
BK
1850
BK
1850
BK
X300
9
X201
2
1850
BK
1850
BK
1850
BK
1850
BK
1850
BK
1850
BK
1850
BK
X225
2
28
1850
BK
1850
BK
1850
BK
1850
BK
1850
BK
X88/Z88
Z75
Z75
(X88/Z88)+(KA1/KB6)
N38
J205
1850
BK
G218

G218 (2 of 2)

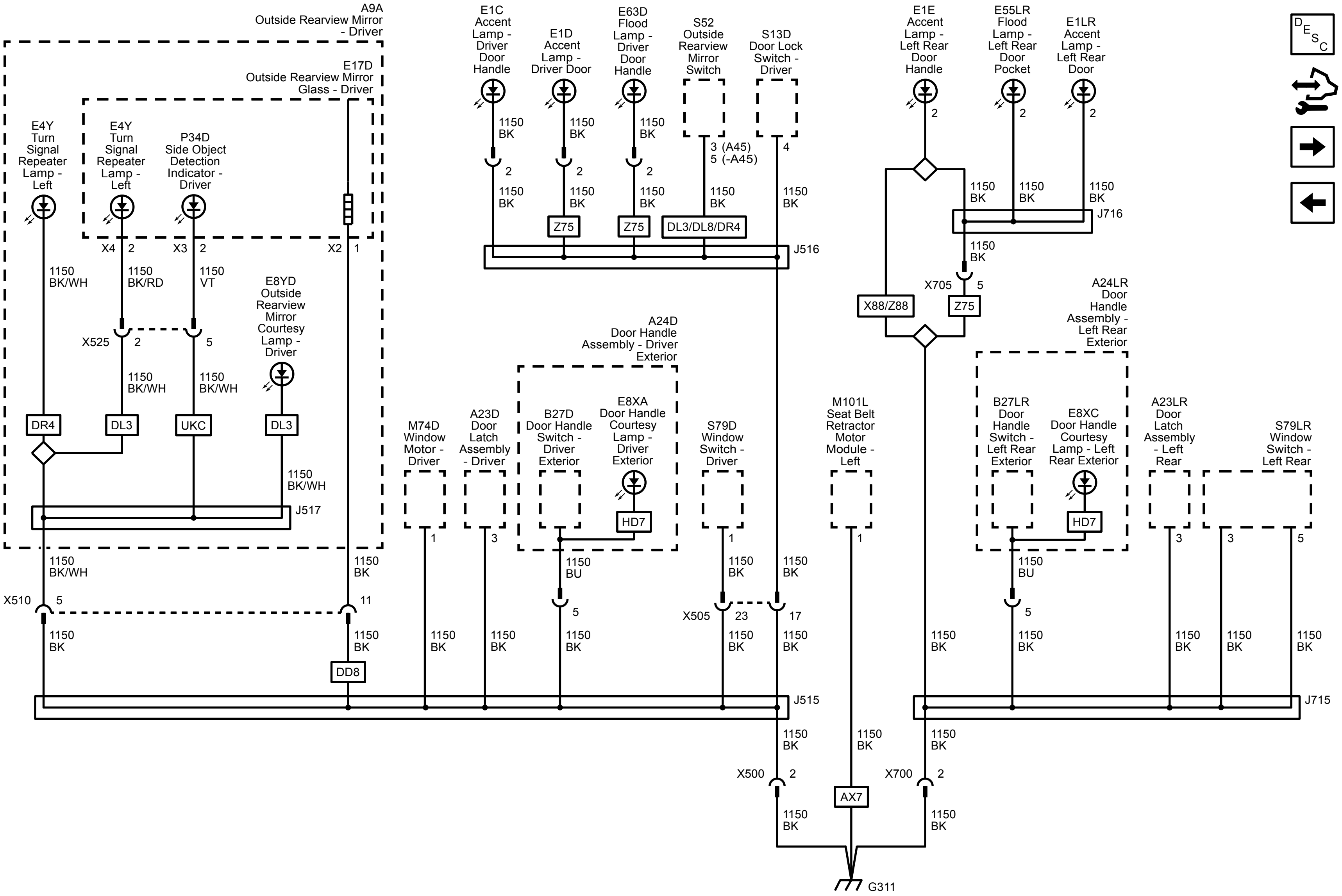

S3
Transmission
Shift Lever
S2A
Transmission
Manual Shift
Switch - Up/
Down
S74
Tow/Haul
Mode
Switch
S78
Turn Signal/
Multifunction
Switch
B99
Steering
Wheel
Angle
Sensor
M7
Transmission
Shift Lock
Control
Solenoid
Actuator
B81B
Park
Position
Switch
X1 13
X2 C
F
X3 2
6
B
B
C
A
1851
BK/WH
J279
K56
Serial Data
Gateway
Module
X84
Data Link
Connector
5
K33
HVAC
Control
Module
X2 8
A34
HVAC Controls -
Auxiliary
4
S38
Ignition
Mode
Switch
4
E1AA
Floor Accent
Lamp - Left
Front
B
X201 42
S91
Park
Brake
Control
Switch
8
P43
Collision Alert
Indicators
4
P29
Head-Up
Display
X1 4
S27
Head-Up
Display
Switch
2
X1 6
P16
Instrument
Cluster
X1 19
X215 9
X300 3
D07
BTM
J71
UEU/UFL/UHX-UV6
UV6
UV6
X4 33
43
34
42
32
41
37
39
38
X61A
Junction
Block -
Instrument
Panel
X4 35
G218

G311 (1 of 2)



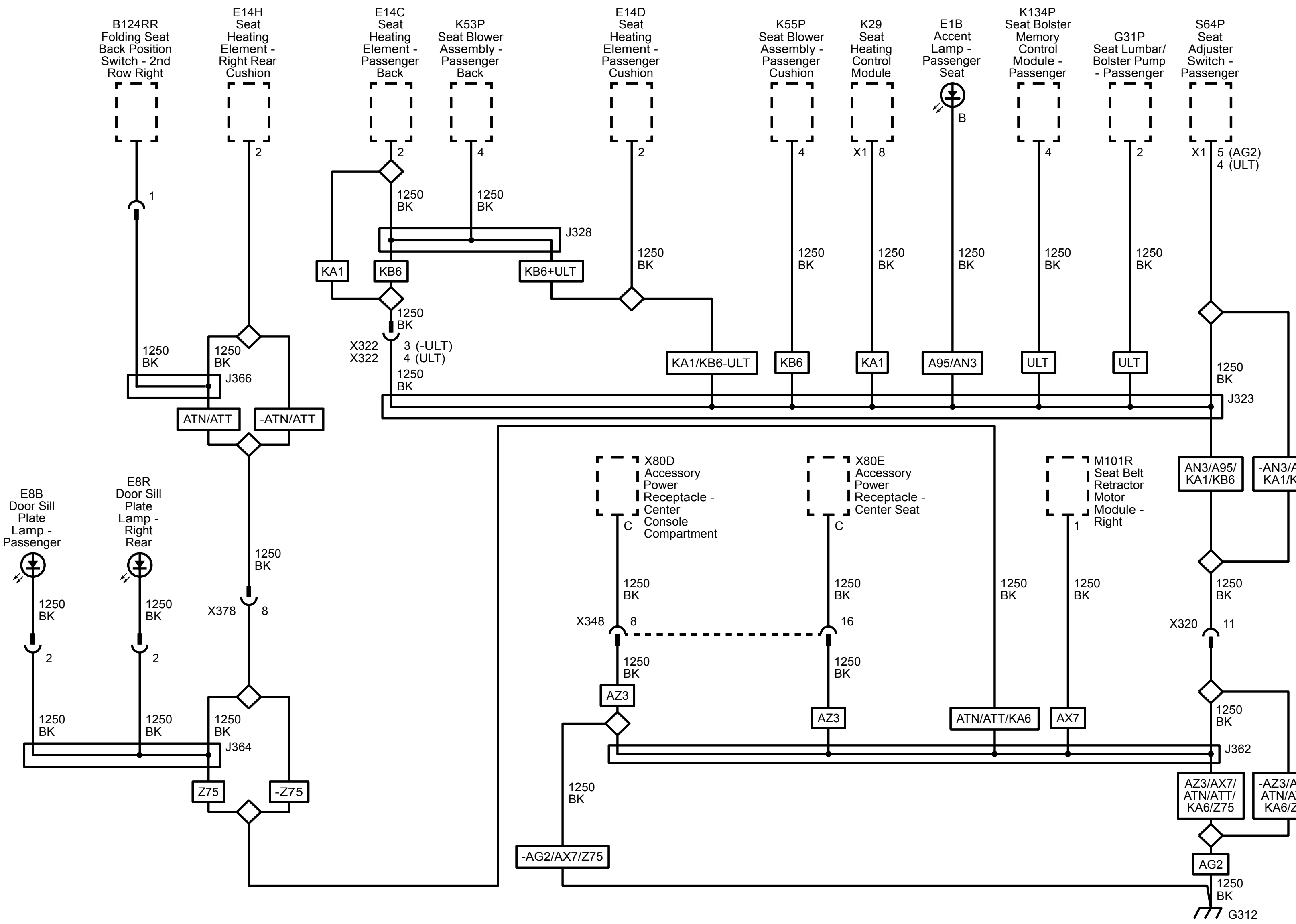
K29R Seat Heating Control Module - Rear
E14F Seat Heating Element - Left Rear Cushion
B124LR Folding Seat Back Position Switch - 2nd Row Left
K53D Seat Blower Assembly - Driver Back
E14A Seat Heating Element - Driver Back
K55D Seat Blower Assembly - Driver Cushion
E14B Seat Heating Element - Driver Cushion
E1A Accent Lamp - Driver Seat
P45LR Seat Haptic Movement Motor - Driver Left Rear
P45RR Seat Haptic Movement Motor - Driver Right Rear
K134D Seat Bolster Memory Control Module - Driver
G31D Seat Lumbar/ Bolster Pump - Driver
K40D Seat Memory Control Module - Driver
S64D Seat Adjuster Switch - Driver
X1 8
X2 5
2
1
4
2
4
2
B
2
2
4
2
X2 5
X1 6 (A45)
X1 2 (-A45)
4 (ULT)
1150 BK
J318
KB6
KA1
X312 5 (-ULT)
X312 6 (ULT)
KA6
KA6
KA6
ATN/ATT
KB6
KA1/KB6
A95/AN3
UEU/ UFL/UHX/ UGN+Z75
UEU/ UFL/UHX/ UGN+Z75
ULT
ULT
A45
J357
J313
A45/A95/ AN3/KA1/ KB6/UFL/ UHX/UGN
-A45/A95/ AN3/KA1/ KB6/UFL/ UHX/UGN
KR57 Rear Fog Lamp Relay
KR162 Liftgate Window Unlatch Relay
X53A Fuse Block - Rear Body
KR5 Rear Defogger Relay
KR4B Outside Rearview Mirror Heater Relay
9
16
60
8
T79
DL3/DL8/DR4
X308 8
ATN/ATT/KA6
P25 Power Sounder Content Theft Deterrent Alarm Module
X80RL Accessory Power Receptacle - Rear Compartment Left
E8A Door Sill Plate Lamp - Driver
E8Q Door Sill Plate Lamp - Left Rear
K169 Folding Seat Control Module - 3rd Row
4
C
2
2
10
X338 6
X310 11
UTT
Z75
Z75
AS8
J354
J353
G311

G311 (2 of 2)

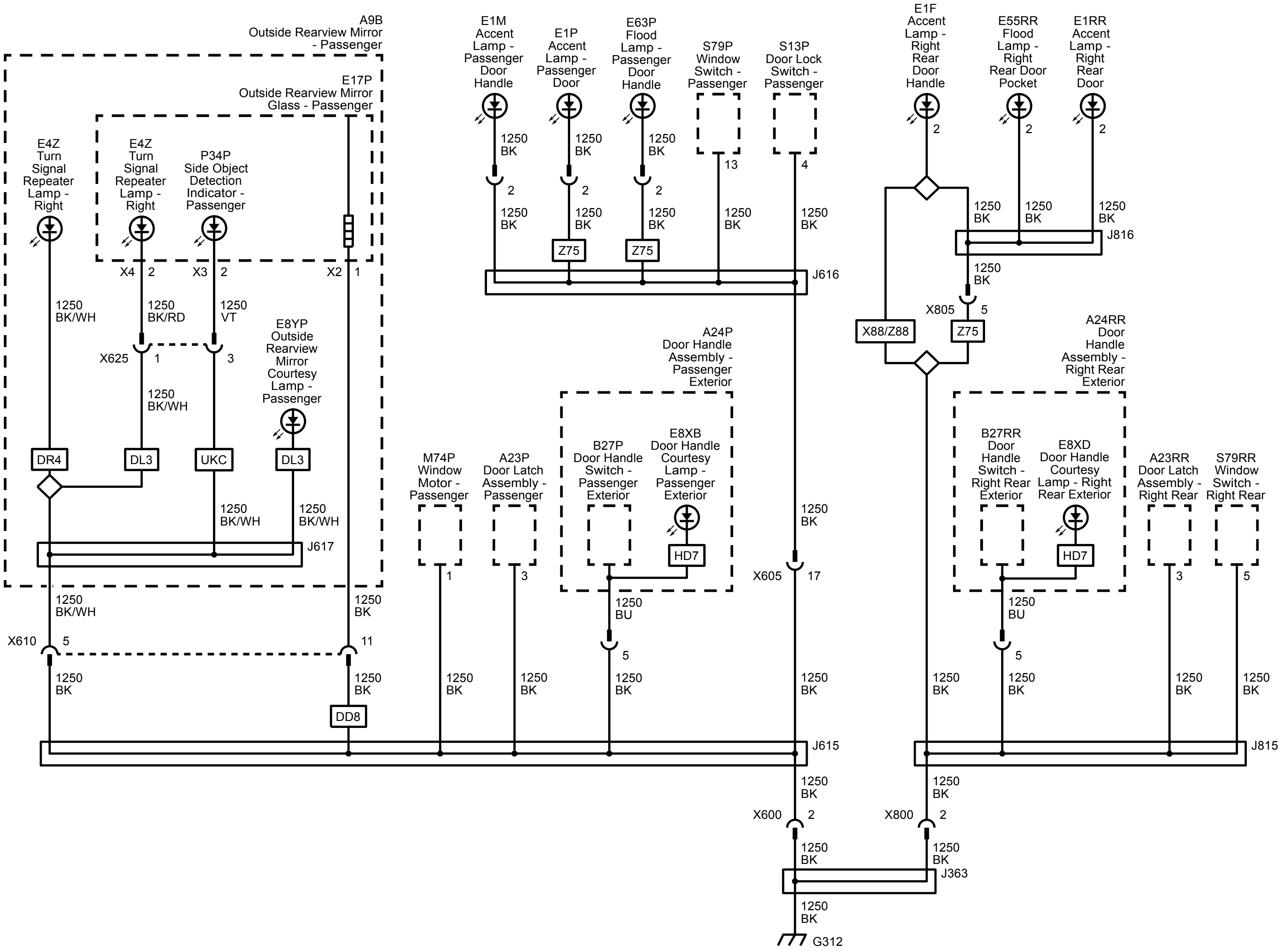

A9A
Outside Rearview Mirror - Driver
E17D
Outside Rearview Mirror Glass - Driver
E4Y
Turn Signal Repeater Lamp - Left
E4Y
Turn Signal Repeater Lamp - Left
P34D
Side Object Detection Indicator - Driver
X4
2
X3
2
X2
1
1150
BK/WH
1150
BK/RD
1150
VT
E8YD
Outside Rearview Mirror Courtesy Lamp - Driver
X525
2
5
1150
BK/WH
1150
BK/WH
DR4
DL3
UKC
DL3
1150
BK/WH
J517
1150
BK/WH
1150
BK
X510
5
11
1150
BK
1150
BK
DD8
E1C
Accent Lamp - Driver Door Handle
E1D
Accent Lamp - Driver Door
E63D
Flood Lamp - Driver Door Handle
S52
Outside Rearview Mirror Switch
S13D
Door Lock Switch - Driver
1150
BK
1150
BK
1150
BK
2
2
2
3 (A45)
5 (-A45)
4
1150
BK
1150
BK
1150
BK
1150
BK
1150
BK
Z75
Z75
DL3/DL8/DR4
J516
A24D
Door Handle Assembly - Driver Exterior
M74D
Window Motor - Driver
A23D
Door Latch Assembly - Driver
B27D
Door Handle Switch - Driver Exterior
E8XA
Door Handle Courtesy Lamp - Driver Exterior
S79D
Window Switch - Driver
HD7
1
3
1
1150
BU
5
1150
BK
1150
BK
X505
23
17
1150
BK
1150
BK
1150
BK
1150
BK
1150
BK
1150
BK
J515
1150
BK
X500
2
1150
BK
M101L
Seat Belt Retractor Motor Module - Left
1
1150
BK
AX7
G311
E1E
Accent Lamp - Left Rear Door Handle
E55LR
Flood Lamp - Left Rear Door Pocket
E1LR
Accent Lamp - Left Rear Door
2
2
2
1150
BK
1150
BK
1150
BK
J716
1150
BK
X705
5
X88/Z88
Z75
A24LR
Door Handle Assembly - Left Rear Exterior
B27LR
Door Handle Switch - Left Rear Exterior
E8XC
Door Handle Courtesy Lamp - Left Rear Exterior
A23LR
Door Latch Assembly - Left Rear
S79LR
Window Switch - Left Rear
HD7
1150
BU
5
3
3
5
1150
BK
1150
BK
1150
BK
1150
BK
1150
BK
J715
1150
BK
X700
2
1150
BK

G312 (1 of 2)

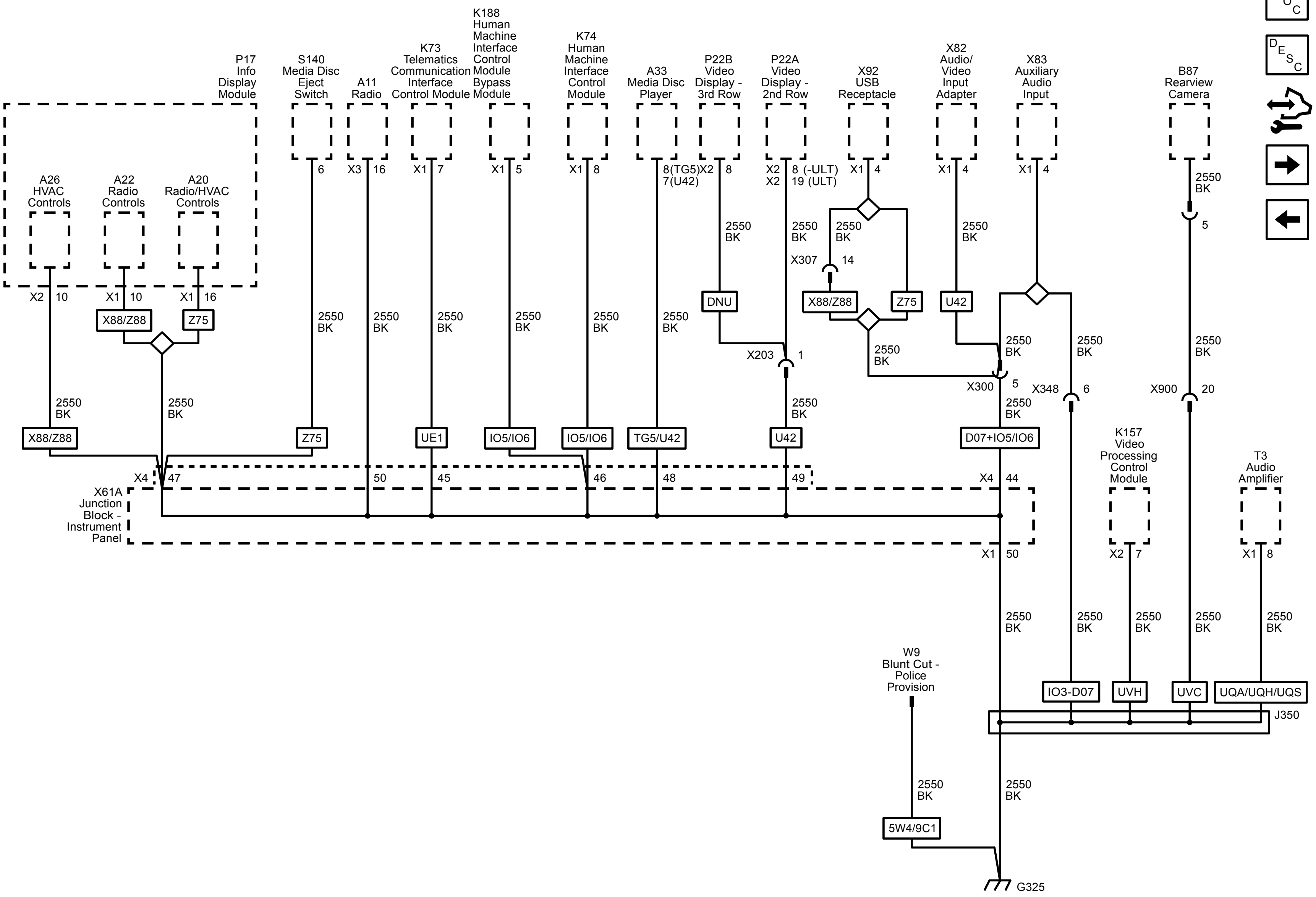
LOC
DESC


B124RR Folding Seat Back Position Switch - 2nd Row Right
E14H Seat Heating Element - Right Rear Cushion
E14C Seat Heating Element - Passenger Back
K53P Seat Blower Assembly - Passenger Back
E14D Seat Heating Element - Passenger Cushion
K55P Seat Blower Assembly - Passenger Cushion
K29 Seat Heating Control Module
E1B Accent Lamp - Passenger Seat
K134P Seat Bolster Memory Control Module - Passenger
G31P Seat Lumbar/ Bolster Pump - Passenger
S64P Seat Adjuster Switch - Passenger
1
2
2
4
2
4
X1 8
B
4
2
X1 5 (AG2) 4 (ULT)
1250 BK
J328
KA1
KB6
KB6+ULT
X322 X322 3 (-ULT) 4 (ULT)
J366
ATN/ATT
-ATN/ATT
KA1/KB6-ULT
KB6
KA1
A95/AN3
ULT
ULT
J323
AN3/A95/ KA1/KB6
-AN3/A95/ KA1/KB6
E8B Door Sill Plate Lamp - Passenger
E8R Door Sill Plate Lamp - Right Rear
X378 8
X80D Accessory Power Receptacle - Center Console Compartment
C
X80E Accessory Power Receptacle - Center Seat
C
M101R Seat Belt Retractor Motor Module - Right
1
X348 8
16
X320 11
AZ3
AZ3
ATN/ATT/KA6
AX7
J362
J364
Z75
-Z75
AZ3/AX7/ ATN/ATT/ KA6/Z75
-AZ3/AX7/ ATN/ATT/ KA6/Z75
-AG2/AX7/Z75
AG2
G312

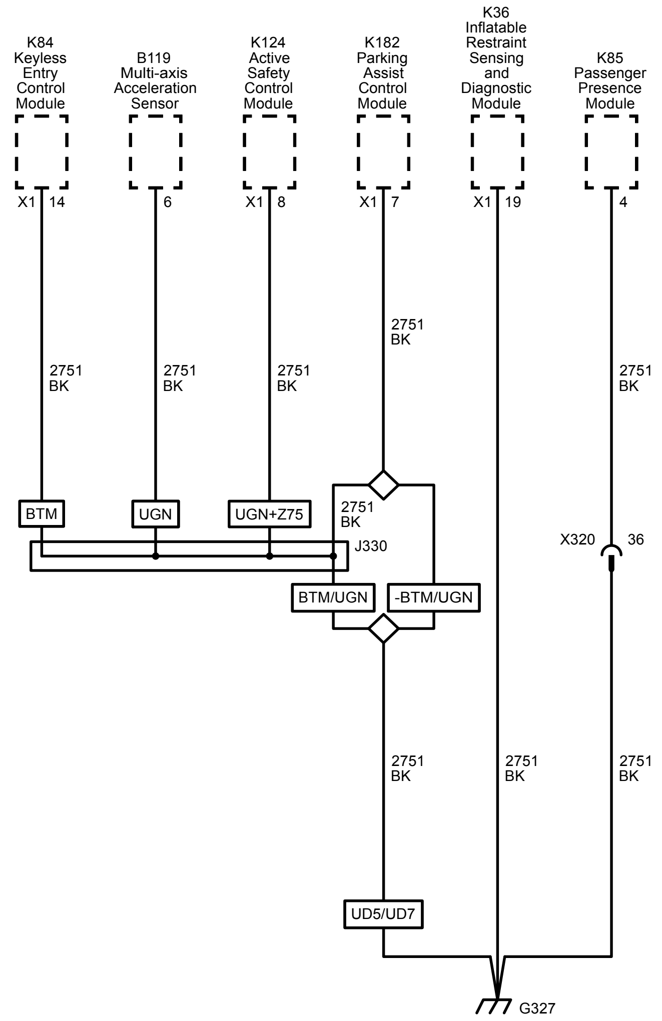
G312 (2 of 2)

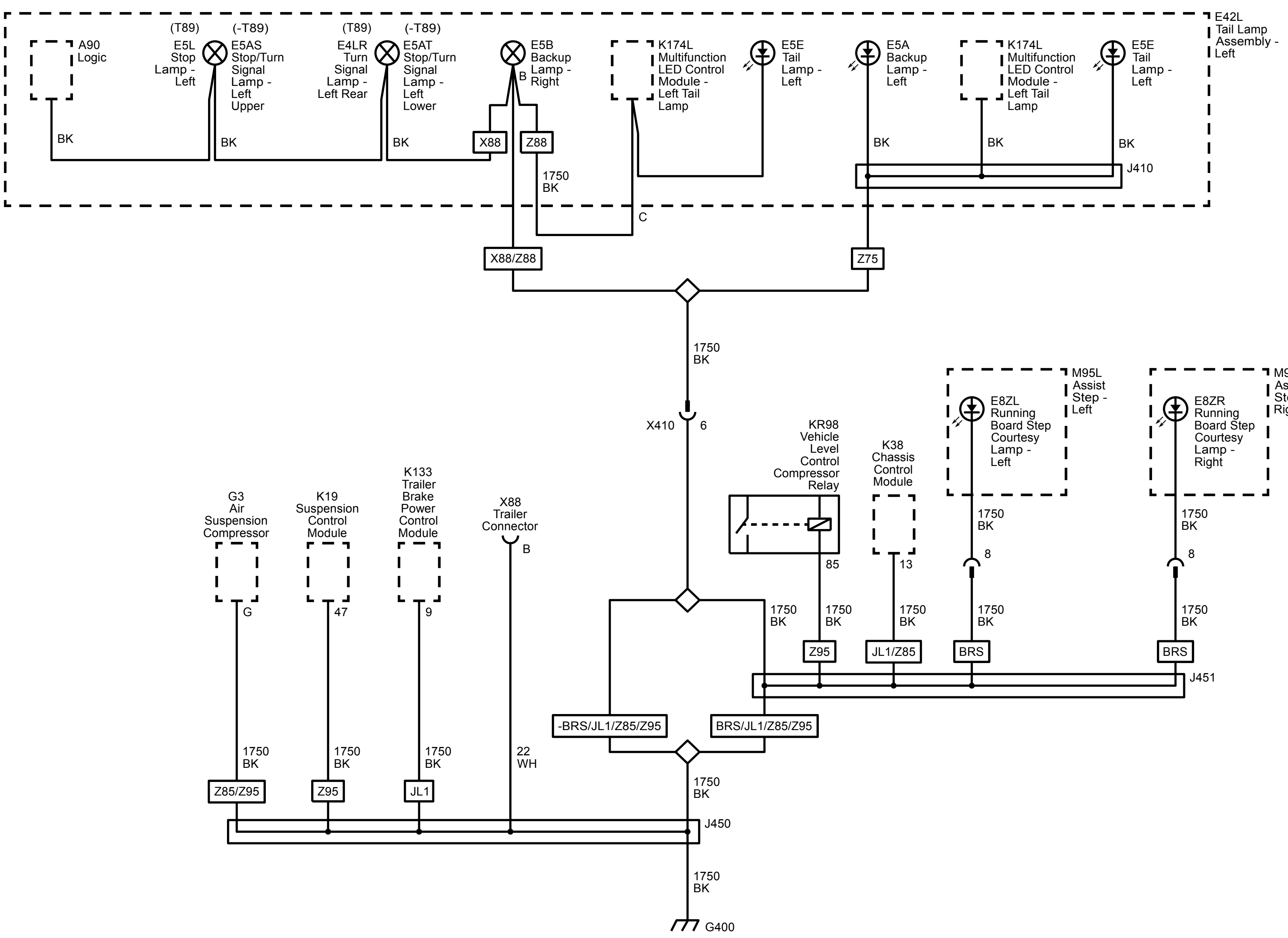

A9B
Outside Rearview Mirror - Passenger
E17P
Outside Rearview Mirror Glass - Passenger
E4Z
Turn Signal Repeater Lamp - Right
E4Z
Turn Signal Repeater Lamp - Right
P34P
Side Object Detection Indicator - Passenger
X4 2
X3 2
X2 1
1250 BK/WH
1250 BK/RD
1250 VT
X625 1
3
1250 BK/WH
E8YP
Outside Rearview Mirror Courtesy Lamp - Passenger
DR4
DL3
UKC
DL3
1250 BK/WH
1250 BK/WH
J617
1250 BK/WH
1250 BK
X610 5
11
1250 BK
1250 BK
DD8
E1M
Accent Lamp - Passenger Door Handle
E1P
Accent Lamp - Passenger Door
E63P
Flood Lamp - Passenger Door Handle
S79P
Window Switch - Passenger
S13P
Door Lock Switch - Passenger
1250 BK
1250 BK
1250 BK
2
2
2
13
4
1250 BK
1250 BK
1250 BK
1250 BK
1250 BK
Z75
Z75
J616
A24P
Door Handle Assembly - Passenger Exterior
B27P
Door Handle Switch - Passenger Exterior
E8XB
Door Handle Courtesy Lamp - Passenger Exterior
HD7
M74P
Window Motor - Passenger
A23P
Door Latch Assembly - Passenger
1
3
1250 BU
5
1250 BK
X605 17
1250 BK
1250 BK
1250 BK
1250 BK
1250 BK
J615
E1F
Accent Lamp - Right Rear Door Handle
E55RR
Flood Lamp - Right Rear Door Pocket
E1RR
Accent Lamp - Right Rear Door
2
2
2
1250 BK
1250 BK
1250 BK
J816
1250 BK
X805 5
X88/Z88
Z75
A24RR
Door Handle Assembly - Right Rear Exterior
B27RR
Door Handle Switch - Right Rear Exterior
E8XD
Door Handle Courtesy Lamp - Right Rear Exterior
HD7
A23RR
Door Latch Assembly - Right Rear
S79RR
Window Switch - Right Rear
3
5
1250 BU
5
1250 BK
1250 BK
1250 BK
1250 BK
J815
1250 BK
1250 BK
X600 2
X800 2
1250 BK
1250 BK
J363
1250 BK
G312

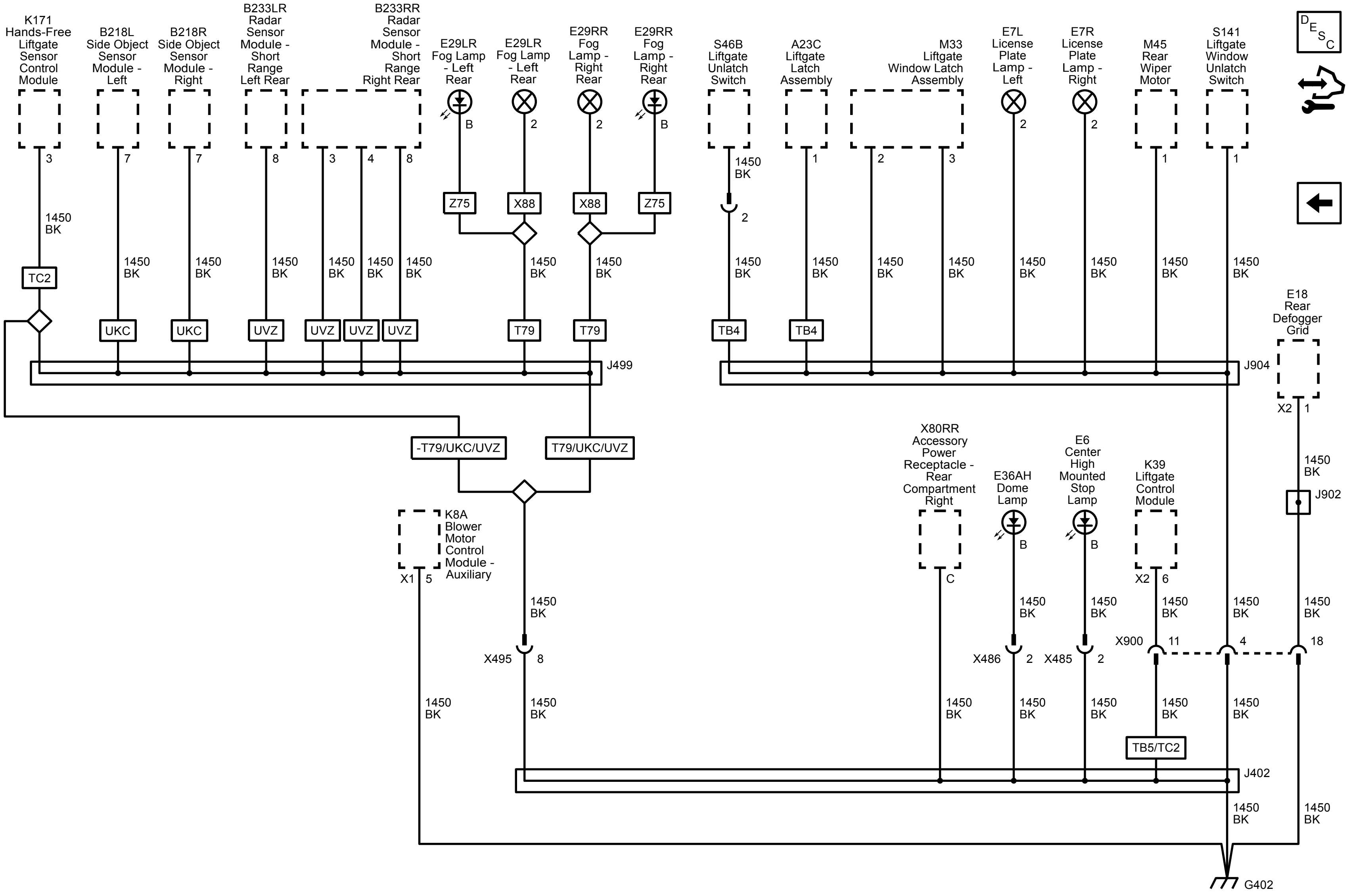
G325


P17 Info Display Module
A26 HVAC Controls
A22 Radio Controls
A20 Radio/HVAC Controls
X2 10
X1 10
X1 16
X88/Z88
Z75
S140 Media Disc Eject Switch
6
A11 Radio
X3 16
K73 Telematics Communication Interface Control Module
X1 7
K188 Human Machine Interface Control Module Bypass Module
X1 5
K74 Human Machine Interface Control Module
X1 8
A33 Media Disc Player
8(TG5) 7(U42)
P22B Video Display - 3rd Row
X2 8
P22A Video Display - 2nd Row
X2 8 (-ULT)
X2 19 (ULT)
X92 USB Receptacle
X1 4
X82 Audio/ Video Input Adapter
X1 4
X83 Auxiliary Audio Input
X1 4
B87 Rearview Camera
2550 BK
5
2550 BK
DNU
X307 14
X88/Z88
Z75
U42
X203 1
X300 5
X348 6
X900 20
X88/Z88
Z75
UE1
IO5/IO6
IO5/IO6
TG5/U42
U42
D07+IO5/IO6
X4 47
50
45
46
48
49
X4 44
X61A Junction Block - Instrument Panel
X1 50
K157 Video Processing Control Module
X2 7
T3 Audio Amplifier
X1 8
W9 Blunt Cut - Police Provision
IO3-D07
UVH
UVC
UQA/UQH/UQS
J350
5W4/9C1
G325

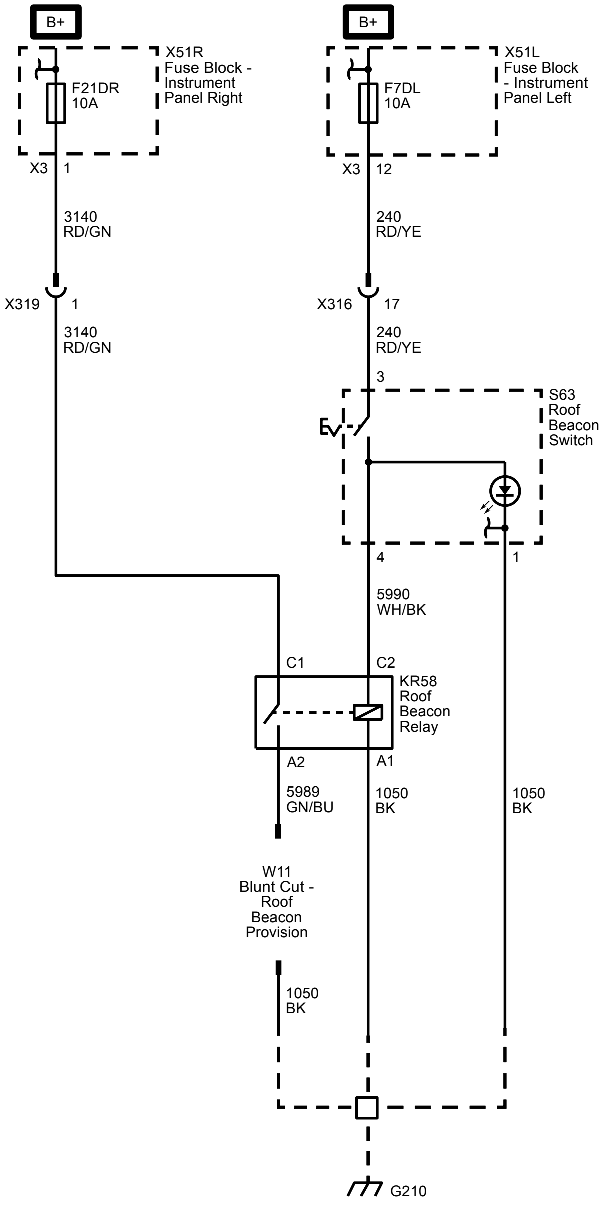
G327


K84 Keyless Entry Control Module
B119 Multi-axis Acceleration Sensor
K124 Active Safety Control Module
K182 Parking Assist Control Module
K36 Inflatable Restraint Sensing and Diagnostic Module
K85 Passenger Presence Module
X1 14
6
X1 8
X1 7
X1 19
4
2751 BK
2751 BK
2751 BK
2751 BK
2751 BK
BTM
UGN
UGN+Z75
2751 BK
J330
X320
36
BTM/UGN
-BTM/UGN
2751 BK
2751 BK
2751 BK
UD5/UD7
G327

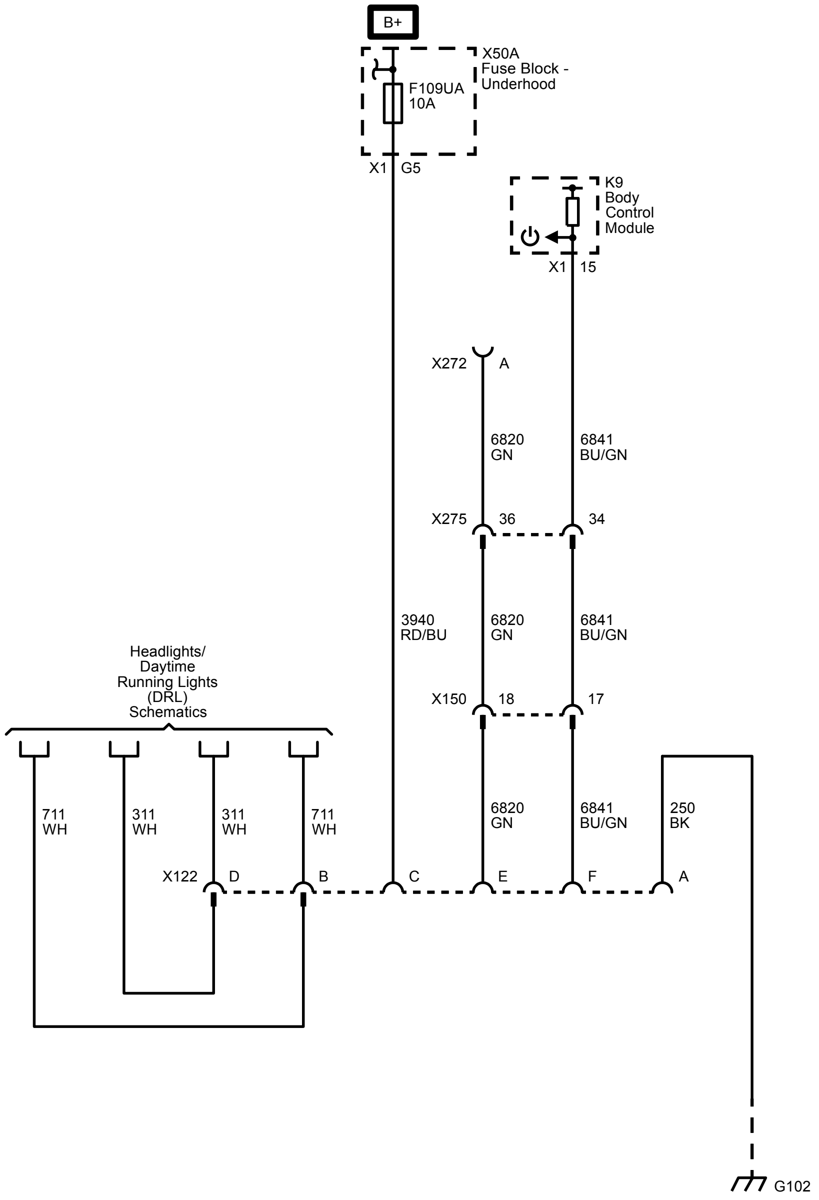

E42L Tail Lamp Assembly - Left
A90 Logic
(T89) E5L Stop Lamp - Left
(-T89) E5AS Stop/Turn Signal Lamp - Left Upper
(T89) E4LR Turn Signal Lamp - Left Rear
(-T89) E5AT Stop/Turn Signal Lamp - Left Lower
E5B Backup Lamp - Right
B
K174L Multifunction LED Control Module - Left Tail Lamp
E5E Tail Lamp - Left
E5A Backup Lamp - Left
K174L Multifunction LED Control Module - Left Tail Lamp
E5E Tail Lamp - Left
BK
BK
BK
X88
Z88
1750 BK
BK
BK
BK
J410
C
X88/Z88
Z75
1750 BK
X410
6
M95L Assist Step - Left
E8ZL Running Board Step Courtesy Lamp - Left
M95R Assist Step - Right
E8ZR Running Board Step Courtesy Lamp - Right
KR98 Vehicle Level Control Compressor Relay
K38 Chassis Control Module
G3 Air Suspension Compressor
K19 Suspension Control Module
K133 Trailer Brake Power Control Module
X88 Trailer Connector
B
85
13
1750 BK
8
1750 BK
8
G
47
9
1750 BK
1750 BK
1750 BK
1750 BK
1750 BK
Z95
JL1/Z85
BRS
BRS
J451
-BRS/JL1/Z85/Z95
BRS/JL1/Z85/Z95
1750 BK
1750 BK
1750 BK
22 WH
1750 BK
Z85/Z95
Z95
JL1
J450
1750 BK
G400

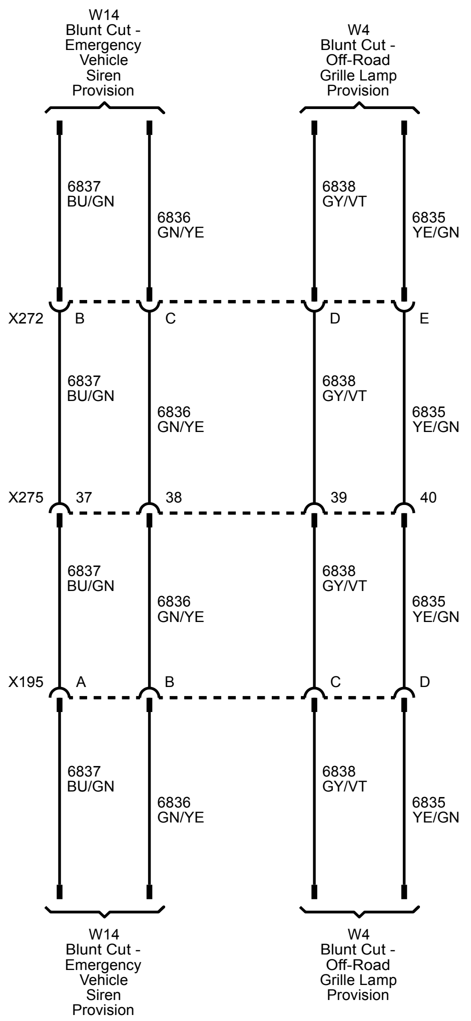

K171 Hands-Free Liftgate Sensor Control Module
B218L Side Object Sensor Module - Left
B218R Side Object Sensor Module - Right
B233LR Radar Sensor Module - Short Range Left Rear
B233RR Radar Sensor Module - Short Range Right Rear
E29LR Fog Lamp - Left Rear
E29LR Fog Lamp - Left Rear
E29RR Fog Lamp - Right Rear
E29RR Fog Lamp - Right Rear
S46B Liftgate Unlatch Switch
A23C Liftgate Latch Assembly
M33 Liftgate Window Latch Assembly
E7L License Plate Lamp - Left
E7R License Plate Lamp - Right
M45 Rear Wiper Motor
S141 Liftgate Window Unlatch Switch
3
7
7
8
3
4
8
B
2
2
B
1
2
3
2
2
1
1
1450 BK
2
Z75
X88
X88
Z75
TC2
UKC
UKC
UVZ
UVZ
UVZ
UVZ
T79
T79
TB4
TB4
J499
J904
E18 Rear Defogger Grid
X2 1
1450 BK
J902
-T79/UKC/UVZ
T79/UKC/UVZ
K8A Blower Motor Control Module - Auxiliary
X1 5
X80RR Accessory Power Receptacle - Rear Compartment Right
C
E36AH Dome Lamp
B
E6 Center High Mounted Stop Lamp
B
K39 Liftgate Control Module
X2 6
X495 8
X486 2
X485 2
X900 11
4
18
TB5/TC2
J402
G402

Roof Beacon Provisions (TRW)

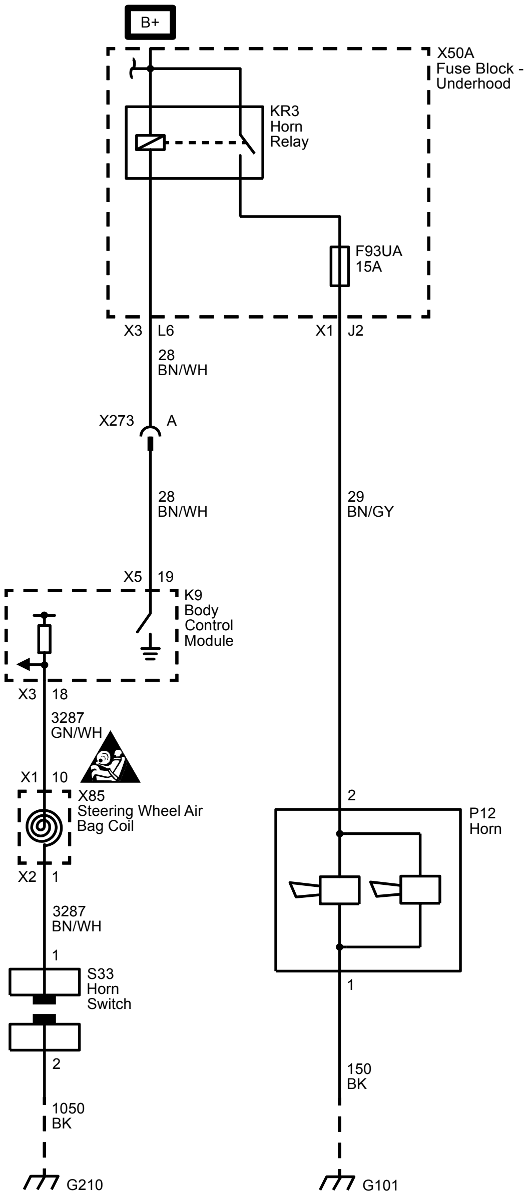

B+
X51R
Fuse Block - Instrument Panel Right
F21DR
10A
X3
1
3140
RD/GN
X319
1
3140
RD/GN
B+
X51L
Fuse Block - Instrument Panel Left
F7DL
10A
X3
12
240
RD/YE
X316
17
240
RD/YE
3
S63
Roof Beacon Switch
4
1
5990
WH/BK
C1
C2
KR58
Roof Beacon Relay
A2
A1
5989
GN/BU
1050
BK
1050
BK
W11
Blunt Cut - Roof Beacon Provision
1050
BK
G210

Headlight Flasher Provisions (6J7)

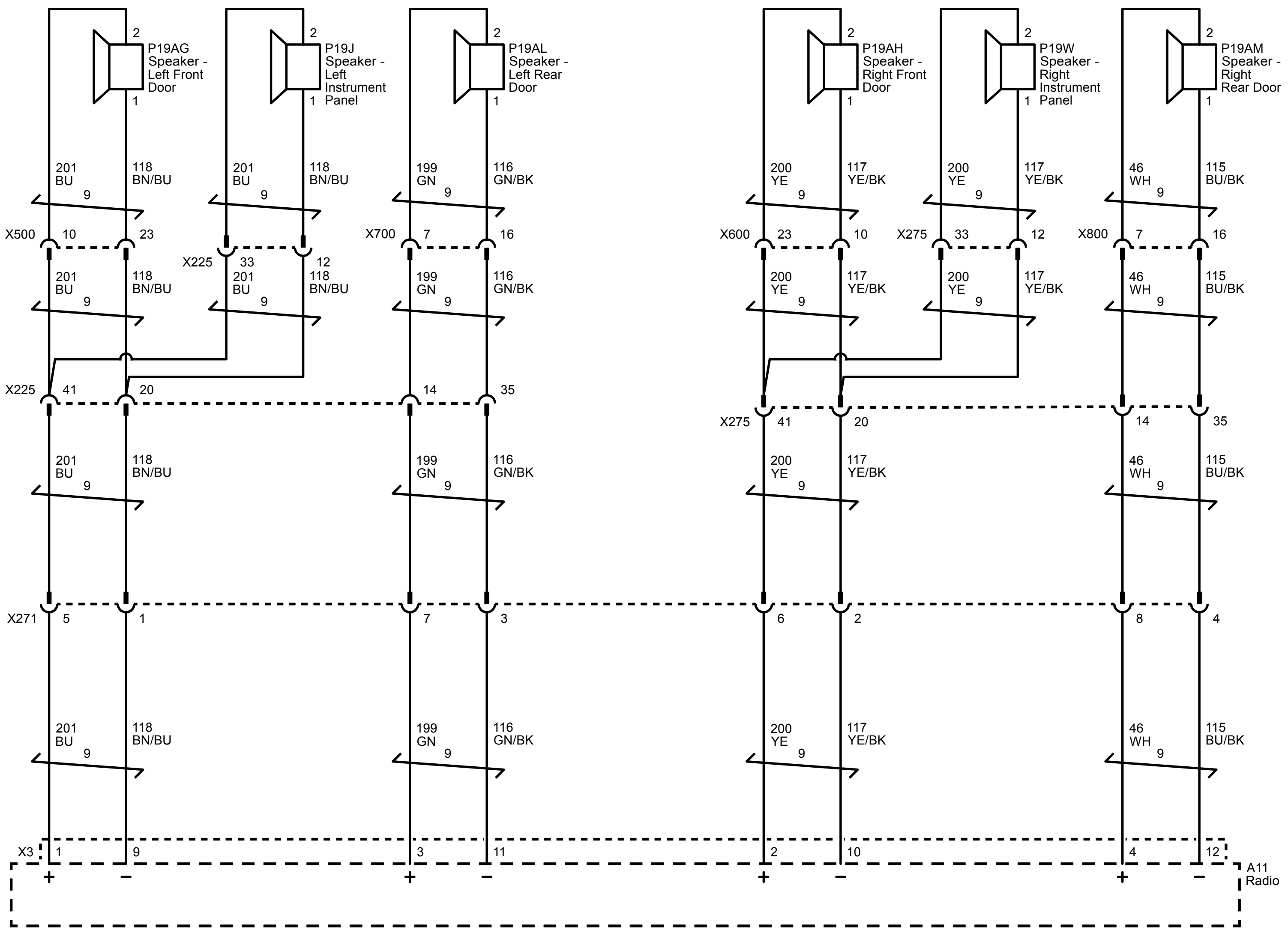

B+
X50A
Fuse Block - Underhood
F109UA
10A
X1
G5
K9
Body
Control
Module
X1
15
X272
A
6820
GN
6841
BU/GN
X275
36
34
3940
RD/BU
6820
GN
6841
BU/GN
Headlights/
Daytime
Running Lights
(DRL)
Schematics
X150
18
17
711
WH
311
WH
311
WH
711
WH
6820
GN
6841
BU/GN
250
BK
X122
D
B
C
E
F
A
G102


W14
Blunt Cut -
Emergency
Vehicle
Siren
Provision
W4
Blunt Cut -
Off-Road
Grille Lamp
Provision
6837
BU/GN
6836
GN/YE
6838
GY/VT
6835
YE/GN
X272
B
C
D
E
6837
BU/GN
6836
GN/YE
6838
GY/VT
6835
YE/GN
X275
37
38
39
40
6837
BU/GN
6836
GN/YE
6838
GY/VT
6835
YE/GN
X195
A
B
C
D
6837
BU/GN
6836
GN/YE
6838
GY/VT
6835
YE/GN
W14
Blunt Cut -
Emergency
Vehicle
Siren
Provision
W4
Blunt Cut -
Off-Road
Grille Lamp
Provision

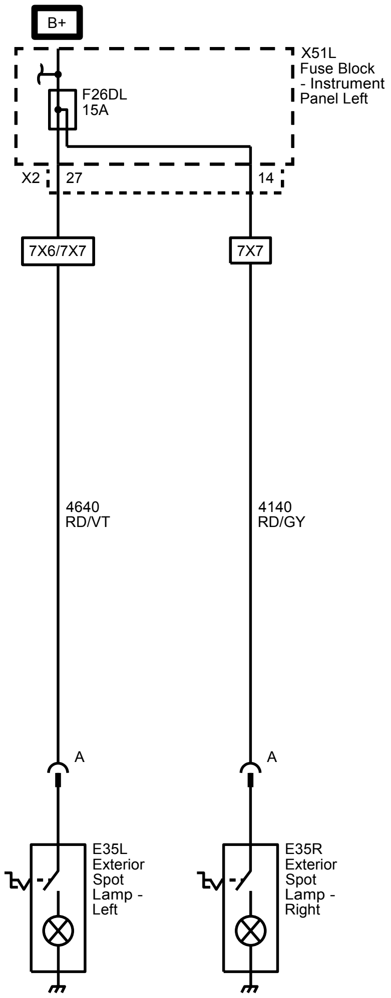
Horn Provision (6J4)


B+
X50A
Fuse Block -
Underhood
KR3
Horn
Relay
F93UA
15A
X3
L6
X1
J2
28
BN/WH
X273
A
28
BN/WH
29
BN/GY
X5
19
K9
Body
Control
Module
X3
18
3287
GN/WH
X1
10
X85
Steering Wheel Air
Bag Coil
X2
1
3287
BN/WH
1
S33
Horn
Switch
2
1050
BK
G210
2
P12
Horn
1
150
BK
G101

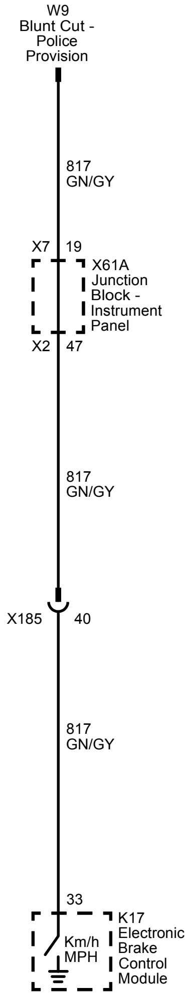
Speaker Inline Provision (WX7)

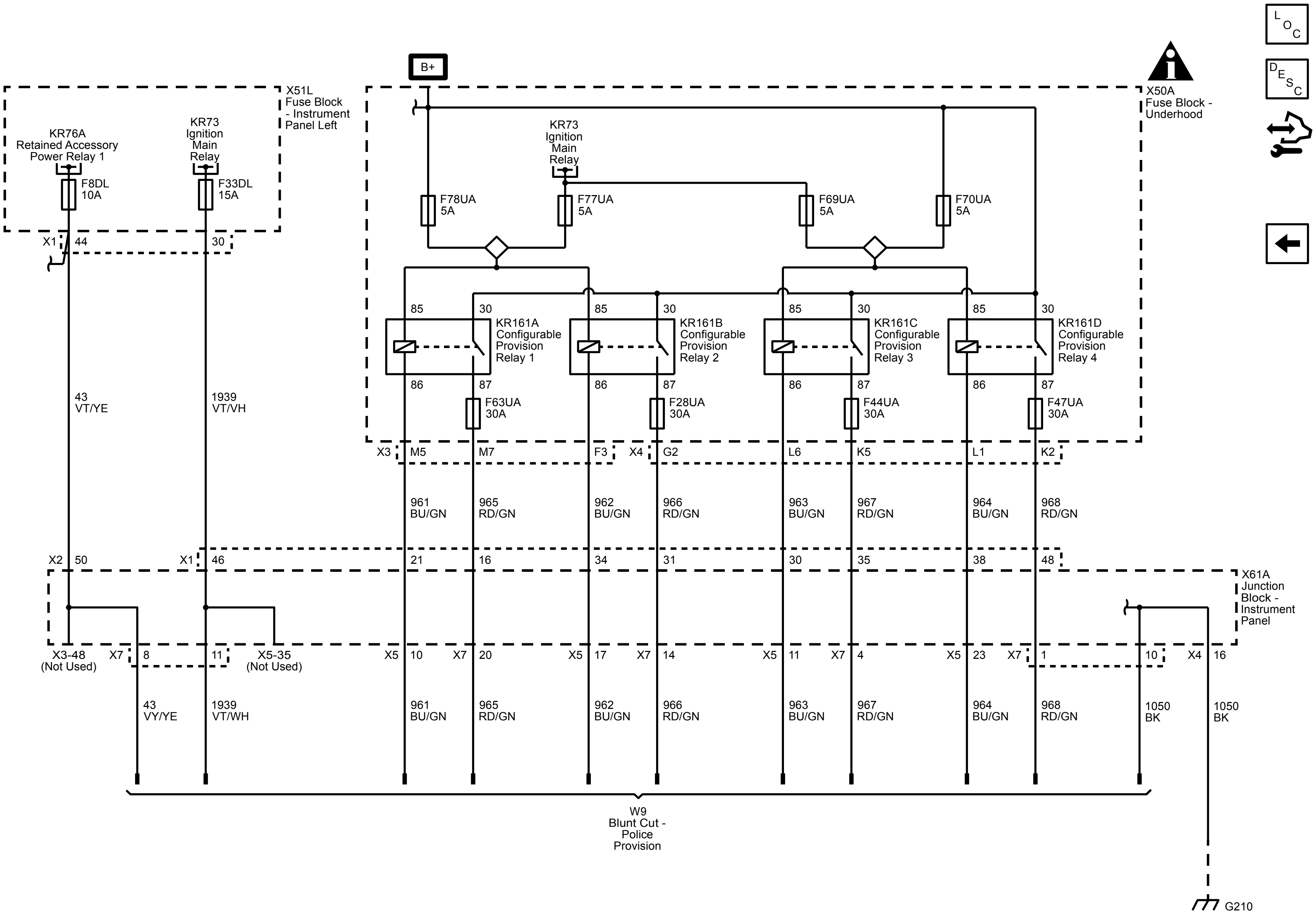

P19AG Speaker - Left Front Door
P19J Speaker - Left Instrument Panel
P19AL Speaker - Left Rear Door
P19AH Speaker - Right Front Door
P19W Speaker - Right Instrument Panel
P19AM Speaker - Right Rear Door
2
1
201 BU 9
118 BN/BU
199 GN 9
116 GN/BK
200 YE 9
117 YE/BK
46 WH 9
115 BU/BK
X500 10 23
X225 33 12
X700 7 16
X600 23 10
X275 33 12
X800 7 16
X225 41 20 14 35
X275 41 20 14 35
X271 5 1 7 3 6 2 8 4
X3 1 9 3 11 2 10 4 12
+
−
A11 Radio

Spot Light (7X6 and 7X7)

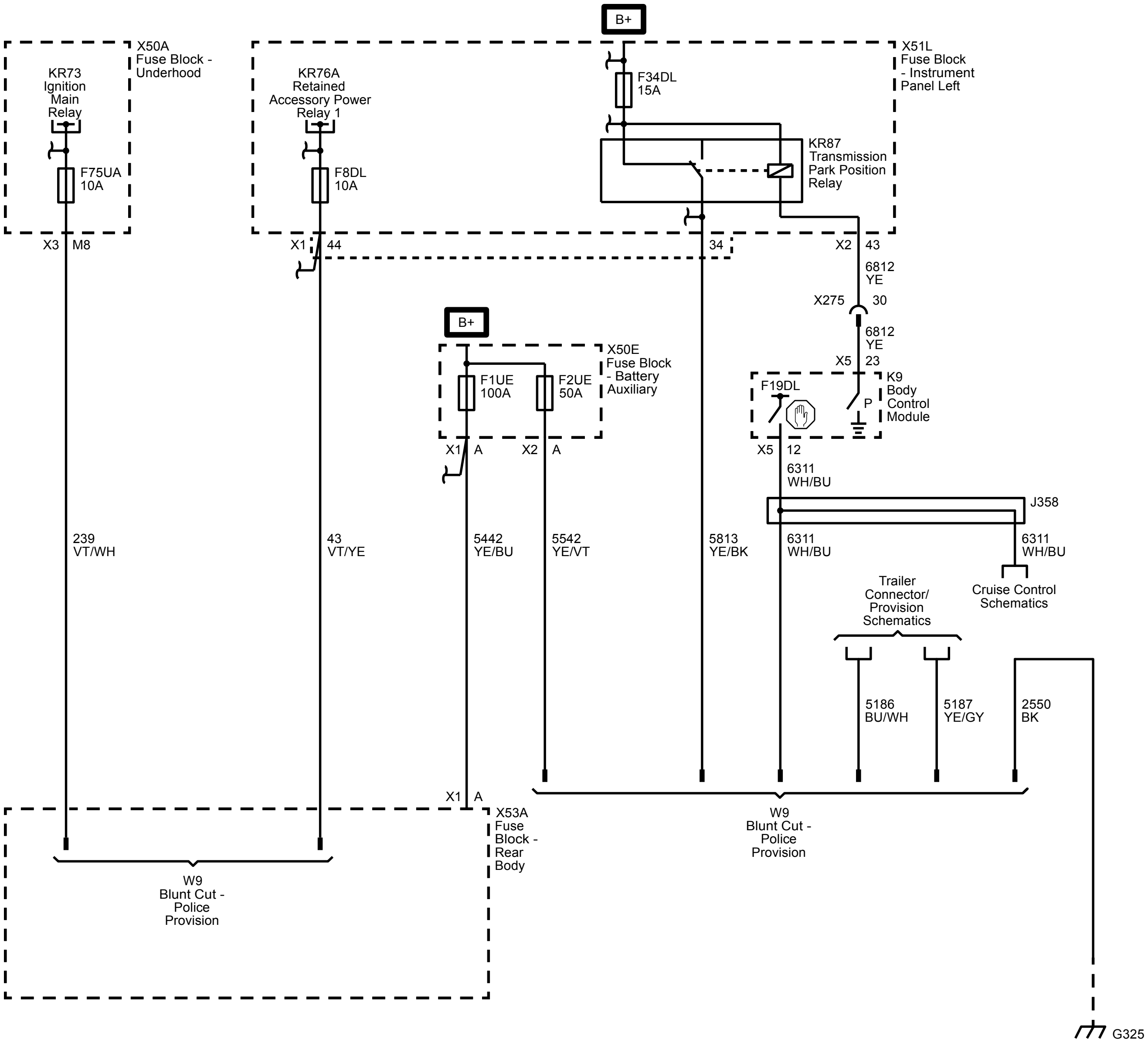

B+
X51L
Fuse Block
- Instrument
Panel Left
F26DL
15A
X2
27
14
7X6/7X7
7X7
4640
RD/VT
4140
RD/GY
A
A
E35L
Exterior
Spot
Lamp -
Left
E35R
Exterior
Spot
Lamp -
Right

Center Instrument Panel - Marked "Circuit 817"

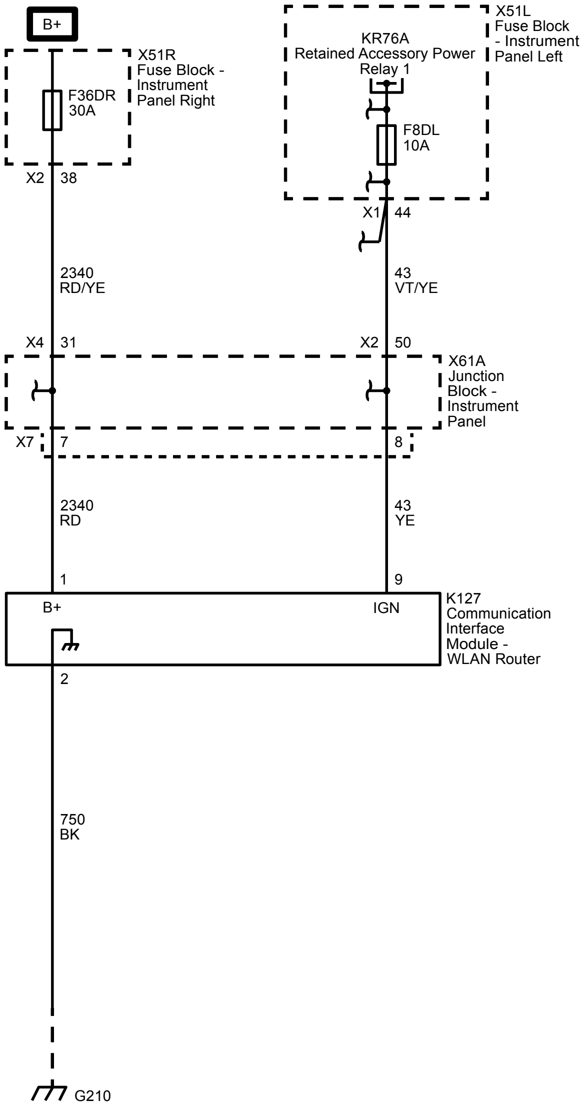

W9
Blunt Cut -
Police
Provision
817
GN/GY
X7
19
X61A
Junction
Block -
Instrument
Panel
X2
47
817
GN/GY
X185
40
817
GN/GY
33
K17
Electronic
Brake
Control
Module
Km/h
MPH


B+
X51L Fuse Block - Instrument Panel Left
KR76A Retained Accessory Power Relay 1
KR73 Ignition Main Relay
F8DL 10A
F33DL 15A
X1 44
30
43 VT/YE
1939 VT/VH
X50A Fuse Block - Underhood
KR73 Ignition Main Relay
F78UA 5A
F77UA 5A
F69UA 5A
F70UA 5A
85
30
KR161A Configurable Provision Relay 1
KR161B Configurable Provision Relay 2
KR161C Configurable Provision Relay 3
KR161D Configurable Provision Relay 4
86
87
F63UA 30A
F28UA 30A
F44UA 30A
F47UA 30A
X3 M5
M7
F3
X4 G2
L6
K5
L1
K2
961 BU/GN
965 RD/GN
962 BU/GN
966 RD/GN
963 BU/GN
967 RD/GN
964 BU/GN
968 RD/GN
X2 50
X1 46
21
16
34
31
30
35
38
48
X61A Junction Block - Instrument Panel
X3-48 (Not Used)
X7 8
11
X5-35 (Not Used)
X5 10
X7 20
X5 17
X7 14
X5 11
X7 4
X5 23
X7 1
10
X4 16
43 VY/YE
1939 VT/WH
961 BU/GN
965 RD/GN
962 BU/GN
966 RD/GN
963 BU/GN
967 RD/GN
964 BU/GN
968 RD/GN
1050 BK
1050 BK
W9 Blunt Cut - Police Provision
G210
L O C
D E S C

Passenger Footwell and Rear Fuse Block (5W4 or 9C1)

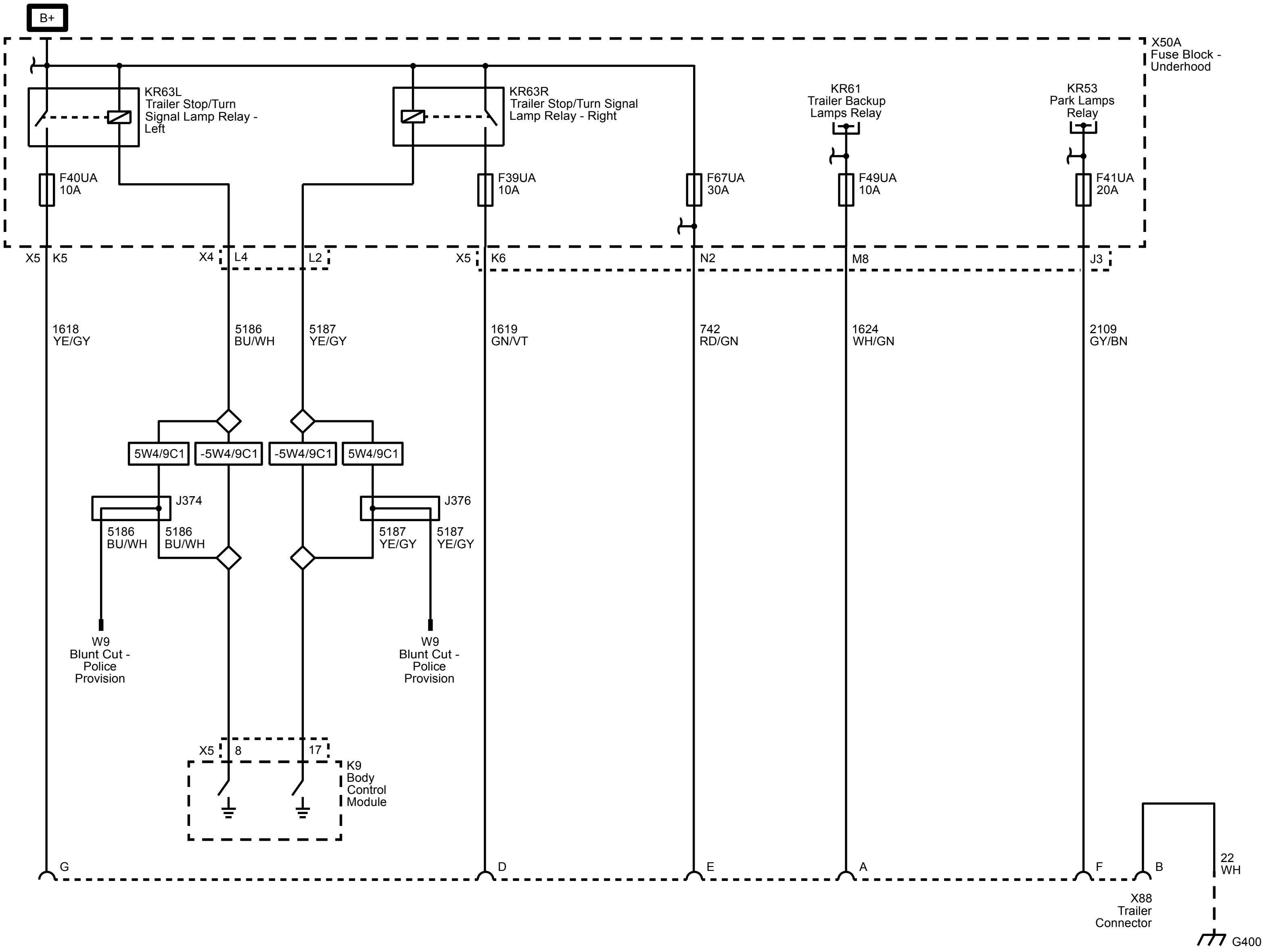

B+
X50A
Fuse Block - Underhood
KR73
Ignition Main Relay
F75UA
10A
X3
M8
X51L
Fuse Block - Instrument Panel Left
KR76A
Retained Accessory Power Relay 1
F8DL
10A
F34DL
15A
KR87
Transmission Park Position Relay
X1
44
34
X2
43
6812
YE
X275
30
6812
YE
X5
23
K9
Body Control Module
F19DL
P
X5
12
6311
WH/BU
J358
6311
WH/BU
6311
WH/BU
Cruise Control Schematics
Trailer Connector/ Provision Schematics
B+
X50E
Fuse Block - Battery Auxiliary
F1UE
100A
F2UE
50A
X1
A
X2
A
239
VT/WH
43
VT/YE
5442
YE/BU
5542
YE/VT
5813
YE/BK
5186
BU/WH
5187
YE/GY
2550
BK
X1
A
X53A
Fuse Block - Rear Body
W9
Blunt Cut - Police Provision
W9
Blunt Cut - Police Provision
G325

Vehicle WiFi Router (Accessory Router)


B+
X51R
Fuse Block -
Instrument
Panel Right
F36DR
30A
X2
38
X51L
Fuse Block
- Instrument
Panel Left
KR76A
Retained Accessory Power
Relay 1
F8DL
10A
X1
44
2340
RD/YE
43
VT/YE
X4
31
X2
50
X61A
Junction
Block -
Instrument
Panel
X7
7
8
2340
RD
43
YE
1
9
B+
IGN
K127
Communication
Interface
Module -
WLAN Router
2
750
BK
G210

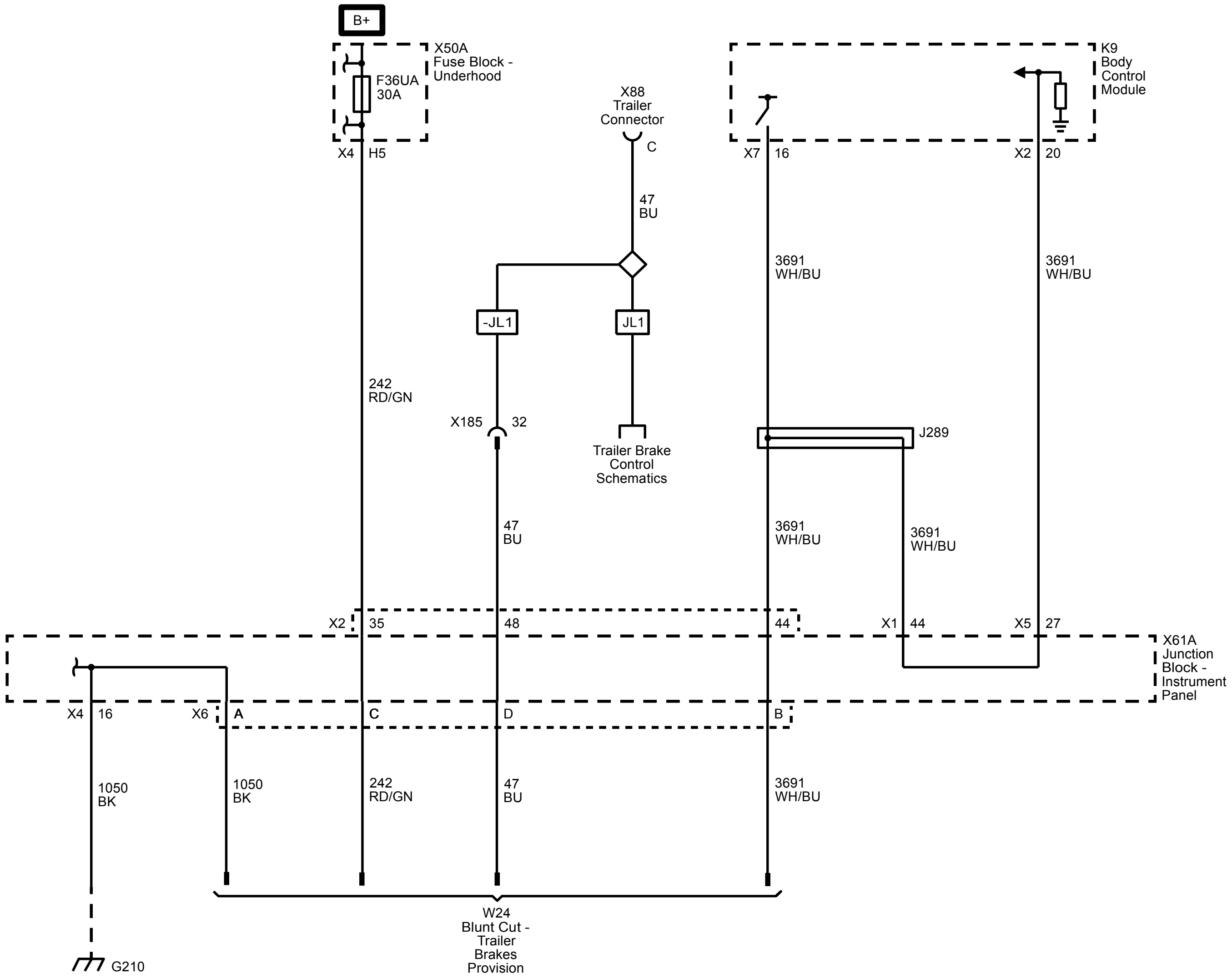
Trailer Connector/Provision Schematics

Trailer Connector Pins: A, B, D, E, F, G



B+
X50A Fuse Block - Underhood
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
KR61 Trailer Backup Lamps Relay
KR53 Park Lamps Relay
F40UA 10A
F39UA 10A
F67UA 30A
F49UA 10A
F41UA 20A
X5 K5
X4 L4
L2
X5 K6
N2
M8
J3
1618 YE/GY
5186 BU/WH
5187 YE/GY
1619 GN/VT
742 RD/GN
1624 WH/GN
2109 GY/BN
5W4/9C1
-5W4/9C1
-5W4/9C1
5W4/9C1
J374
J376
5186 BU/WH
5186 BU/WH
5187 YE/GY
5187 YE/GY
W9 Blunt Cut - Police Provision
W9 Blunt Cut - Police Provision
X5 8
17
K9 Body Control Module
G
D
E
A
F
B
22 WH
X88 Trailer Connector
G400

Trailer Connector Pin: C


B+
X50A
Fuse Block -
Underhood
F36UA
30A
X4 H5
X88
Trailer
Connector
C
47
BU
K9
Body
Control
Module
X7 16
X2 20
3691
WH/BU
3691
WH/BU
-JL1
JL1
242
RD/GN
X185 32
Trailer Brake
Control
Schematics
J289
47
BU
3691
WH/BU
3691
WH/BU
X2 35
48
44
X1 44
X5 27
X61A
Junction
Block -
Instrument
Panel
X4 16
X6 A
C
D
B
1050
BK
1050
BK
242
RD/GN
47
BU
3691
WH/BU
W24
Blunt Cut -
Trailer
Brakes
Provision
G210

Master Electrical Component List

Code	Name	Option	Location	Locator View	Connector End View
A3L	Sunshade - Left	—	In the front of the passenger compartment, above the driver seat	—	—
A3R	Sunshade - Right	—	In the front of the passenger compartment, above the passenger seat	—	—
A6D	Fuel Pump and Level Sensor Assembly - Secondary	L96	Under the vehicle, mounted in the rear fuel tank	—	*A6D Fuel Pump and Level Sensor Assembly - Secondary*
A7	Fuel Pump and Level Sensor Assembly	—	Under the vehicle in the fuel tank	—	*A7 Fuel Pump and Level Sensor Assembly*
A9A	Outside Rearview Mirror - Driver	—	Outside the vehicle, at the front of the driver door	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)* • *Front of Vehicle Components (Z75)*	—
A9B	Outside Rearview Mirror - Passenger	—	Outside the vehicle, at the front of the passenger door	• *Front of Vehicle Components (Z75)* • *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	—
A10	Inside Rearview Mirror	—	In the passenger compartment, at the top center of the windshield	*Overhead Console Components*	• *A10 Inside Rearview Mirror X1* • *A10 Inside Rearview Mirror X2 (DRZ)*
A11	Radio	—	In the passenger compartment, center of the instrument panel, behind the HVAC controls	• *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 without D07/DCK)*	• *A11 Radio X1* • *A11 Radio X2* • *A11 Radio X3*
A14D	Seat Lumbar Support Pump - Driver	A45, with Y91 or Z75 without ULT	In the passenger compartment, part of the driver seat back	*Driver Seat Back Components*	*A14D Seat Lumbar Support Pump - Driver*
A14P	Seat Lumbar Support Pump - Passenger	Y91 or Z75 without ULT	In the passenger compartment, part of the passenger seat back	*Passenger Seat Components View*	*A14P Seat Lumbar Support Pump - Passenger*
A16	Transfer Case Motor	NP0 or NQH	On the underbody, mounted to the bottom rear of the transfer case	*Transfer Case Components (NP0 or NQH)*	*A16 Transfer Case Motor*
A19D	DVD Player - Driver Seat Headrest	AYE	In the passenger compartment, back side of driver seat head rest	—	—
A19P	DVD Player - Passenger Seat Headrest	AYE	In the passenger compartment, back side of passenger seat head rest	—	—
A20	Radio/HVAC Controls	Z75	In the passenger compartment, at the center of the instrument panel, part of the info display module	—	—

A22	Radio Controls	X88 or Z88	In the passenger compartment, at the center of the instrument panel, part of the info display module	*Front of Instrument Panel Components (X88/Z88 with D07/DCK)*	—
A23C	Liftgate Latch Assembly	—	In the passenger compartment, at the bottom middle of the liftgate	*Liftgate Components*	- *A23C Liftgate Latch Assembly (TB5/TC2)* - *A23C Liftgate Latch Assembly (-TB5/TC2)*
A23D	Door Latch Assembly - Driver	—	In the passenger compartment, at the middle rear of the driver door	- *Driver Door Components (X88 or Z88)* - *Driver Door Components (Z75)*	*A23D Door Latch Assembly - Driver*
A23LR	Door Latch Assembly - Left Rear	—	In the passenger compartment, at the middle rear of the left rear door	- *Left Rear Door Components (Z75)* - *Left Rear Door Components (X88 or Z88)*	*A23LR Door Latch Assembly - Left Rear*
A23P	Door Latch Assembly - Passenger	—	In the passenger compartment, at the middle rear of the passenger door	- *Passenger Door Components (X88 or Z88)* - *Right Rear Door Components (X88 or Z88)* - *Passenger Door Components (Z75)*	*A23P Door Latch Assembly - Passenger*
A23RR	Door Latch Assembly - Right Rear	—	In the passenger compartment, at the middle rear of the right rear door	*Right Rear Door Components (Z75)*	*A23RR Door Latch Assembly - Right Rear*
A24D	Door Handle Assembly - Driver Exterior	—	Outside the vehicle, at the rear of the driver door	- *Driver Door Components (Z75)* - *Driver Door Components (X88 or Z88)*	—
A24LR	Door Handle Assembly - Left Rear Exterior	—	Outside the vehicle, at the rear of the left rear door	- *Left Rear Door Components (Z75)* - *Left Rear Door Components (X88 or Z88)*	- *A24LR Door Handle Assembly - Left Rear Exterior (X88/Z88)* - *A24LR Door Handle Assembly - Left Rear Exterior (Z75)*
A24P	Door Handle Assembly - Passenger Exterior	—	Outside the vehicle, at the rear of the passenger door	- *Passenger Door Components (X88 or Z88)* - *Passenger Door Components (Z75)*	- *A24P Door Handle Assembly - Passenger Exterior (ATH+(X88/Z88))* - *A24P Door Handle Assembly - Passenger Exterior (Z75)*
A24RR	Door Handle Assembly - Right Rear Exterior	—	Outside the vehicle, at the rear of the right rear door	- *Right Rear Door Components (X88 or Z88)* - *Right Rear Door Components (Z75)*	- *A24RR Door Handle Assembly - Right Rear Exterior (X88/Z88)* - *A24RR Door Handle Assembly - Right Rear Exterior (Z75)*
A26	HVAC Controls	X88 or Z88	In the passenger compartment, at the center of the instrument panel, part of the info display module	- *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* - *Front of Instrument Panel Components (Z75)*	—

A33	Media Disc Player	TG5 or U42	In the passenger compartment, lower center of the instrument panel, behind the radio controls	• *Front of Instrument Panel Components (Z75)* • *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	• *A33 Media Disc Player X1 (TG5)* • *A33 Media Disc Player X1 (U42)* • *A33 Media Disc Player X2*
A34	HVAC Controls - Auxiliary	AZ3/D07/DCK	In the passenger compartment, forward of center, between the driver and passenger seat, at the back of the floor console	• *Center Console Rear Component Views (Z75)* • *Center Console Rear Component Views (X88/Z88)* • *Headliner Components*	• *A34 HVAC Controls - Auxiliary (AZ3)* • *A34 HVAC Controls - Auxiliary (X88/Z88+D07)* • *A34 HVAC Controls - Auxiliary (X88/Z88+DCK)* • *A34 HVAC Controls - Auxiliary (Z75+D07)* • *A34 HVAC Controls - Auxiliary (Z75+DCK)*
B1	A/C Refrigerant Pressure Sensor	—	In the front of the engine compartment, on the right side of the A/C compressor	• *Right Rear Side of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	*B1 A/C Refrigerant Pressure Sensor*
B5LF	Wheel Speed Sensor - Left Front	—	Outside the vehicle, in the left front hub assembly	*Chassis Components View*	*B5LF Wheel Speed Sensor - Left Front*
B5LR	Wheel Speed Sensor - Left Rear	—	Outside the vehicle, in the left rear, along axle at brake rotor	*Chassis Components View*	*B5LR Wheel Speed Sensor - Left Rear*
B5RF	Wheel Speed Sensor - Right Front	—	Outside the vehicle, in the right front hub assembly	*Chassis Components View*	*B5RF Wheel Speed Sensor - Right Front*
B5RR	Wheel Speed Sensor - Right Rear	—	Outside the vehicle, in the right rear, along axle at brake rotor	—	*B5RR Wheel Speed Sensor - Right Rear*
B7C	Air Temperature Sensor - Duct Lower Auxiliary	—	In the passenger compartment, in the floor vent of the rear HVAC	—	—
B7D	Air Temperature Sensor - Duct Left Lower	—	In the passenger compartment, behind the instrument panel, on the left side of the HVAC module	*Front of HVAC Assembly Components*	—
B7E	Air Temperature Sensor - Duct Right Lower	—	In the passenger compartment, behind the instrument panel, on the right side of the HVAC module	*Front of HVAC Assembly Components*	—
B7G	Air Temperature Sensor - Duct Upper Auxiliary	SWB	In the passenger compartment, in the roof vent of the rear HVAC	—	—
B7H	Air Temperature Sensor - Duct Left Upper	—	In the passenger compartment, behind the instrument panel, on the upper left side of the HVAC module	*Back of HVAC Assembly Components*	—
B7J	Air Temperature Sensor - Duct Right Upper	—	In the passenger compartment, behind the instrument panel, on the upper right side of the HVAC module	*Back of HVAC Assembly Components*	—

B9	Ambient Air Temperature Sensor	—	Left front of the vehicle, left of the hood latch assembly	• *Behind Front Fascia Components (Z75)* • *Front of Vehicle Components (Z75)* • *Behind Front Fascia Components (X88/Z88)* • *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*B9 Ambient Air Temperature Sensor*
B10B	Ambient Light/Sunload Sensor	—	In the passenger compartment, at the top center of the instrument panel, in the defroster deflector	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Front of Instrument Panel Components (Z75)*	*B10B Ambient Light/Sunload Sensor*
B12A	Transmission Fluid Pressure Switch	MYC or MYD	Under the vehicle, internal to the transmission assembly, part of the control solenoid valve	—	—
B13	Transmission Fluid Temperature Sensor	—	Under the vehicle, internal to the transmission assembly, part of the control solenoid valve	*Automatic Transmission Valve Body Components (M5U)*	—
B14A	Transmission Output Shaft Speed Sensor	—	Under the vehicle, internal to the transmission assembly	• *Automatic Transmission Internal Components (MYC or MYD)* • *Automatic Transmission Case Components (M5U)*	*B14A Transmission Output Shaft Speed Sensor*
B14C	Transmission Input Shaft Speed Sensor	—	Under the vehicle, internal to the transmission assembly	*Automatic Transmission Case Components (M5U)*	—
B14D	Transmission Intermediate Shaft Speed Sensor	M5U	Under the vehicle, internal to the transmission assembly	*Automatic Transmission Case Components (M5U)*	—
B15	Transmission Internal Mode Switch	M5U	Under the vehicle, internal to the transmission assembly	• *Automatic Transmission Case Components (M5U)* • *Automatic Transmission Internal Components (MYC or MYD)*	—
B18	Battery Current Sensor	—	In the engine compartment, right rear, near the battery, on the negative battery cable	*Right Rear of Engine Compartment Components (1 of 2)*	*B18 Battery Current Sensor*
B19B	Brake Booster Vacuum Sensor	—	At the rear of the engine compartment, left of the brake fluid reservoir, on brake booster vacuum check valve	*Left Side of Engine Compartment Component View*	*B19B Brake Booster Vacuum Sensor*
B20	Brake Fluid Level Switch	—	At the rear of the engine compartment, on the brake fluid reservoir	*Left Side of Engine Compartment Component View*	*B20 Brake Fluid Level Switch*
B22	Brake Pedal Position Sensor	—	In the passenger compartment, behind the brake pedal assembly	*Behind Left Side of Instrument Panel Components (1 of 2)*	*B22 Brake Pedal Position Sensor*
B23	Camshaft Position Sensor	—	In the engine compartment, at the front of the engine, left side of timing chain cover.	*Front of Engine Components (L83 or L86)*	*B23 Camshaft Position Sensor*
B24	Cellular Phone Microphone	—	In the passenger compartment, at the front center of the headliner, near the left sunshade	*Headliner Components*	*B24 Mobile Telephone Microphone*

B26	Crankshaft Position Sensor	—	In the engine compartment, lower right rear of engine block	• *Right Rear Side of Engine Components (L96)* • *Right Rear Side of Engine Components (L83 or L86)*	• *B26 Crankshaft Position Sensor ((L83/L86)+MYC)* • *B26 Crankshaft Position Sensor (L86+M5U)* • *B26 Crankshaft Position Sensor (L96)*
B27D	Door Handle Switch - Driver Exterior	—	Outside the vehicle, at the rear of the driver door, part of the door handle assembly	• *Driver Door Components (Z75)* • *Driver Door Components (X88 or Z88)*	• *B27D Door Handle Switch - Driver Exterior (X88/Z88)* • *B27D Door Handle Switch - Driver Exterior (Z75)*
B27LR	Door Handle Switch - Left Rear Exterior	—	Outside the vehicle, at the rear of the left rear door, part of the door handle assembly	• *Left Rear Door Components (Z75)* • *Left Rear Door Components (X88 or Z88)*	—
B27P	Door Handle Switch - Passenger Exterior	—	Outside the vehicle, at the rear of the passenger door, part of the door handle assembly	• *Passenger Door Components (X88 or Z88)* • *Passenger Door Components (Z75)*	• *B27P Door Handle Switch - Passenger Exterior (X88/Z88)* • *B27P Door Handle Switch - Passenger Exterior (Z75)*
B27RR	Door Handle Switch - Right Rear Exterior	—	Outside the vehicle, at the rear of the right rear door, part of the door handle assembly	• *Right Rear Door Components (X88 or Z88)* • *Right Rear Door Components (Z75)*	—
B34	Engine Coolant Temperature Sensor	—	In the engine compartment, top of the engine, left of the air intake, in the water outlet housing	• *Left Rear Side of Engine Components (L96)* • *Left Side of Engine Components (L83 or L86)*	• *B34 Engine Coolant Temperature Sensor ((L83/L86)+MYC)* • *B34 Engine Coolant Temperature Sensor (L86+M5U)* • *B34 Engine Coolant Temperature Sensor (L96)*
B35	Engine Oil Level Switch	L83 or L86	In the engine compartment, bottom right side of engine	*Right Rear Side of Engine Components (L83 or L86)*	*B35 Engine Oil Level Switch*
B37B	Engine Oil Pressure Sensor	L83 or L86	In the engine compartment, top of the engine, below throttle body	• *Left Side of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	• *B37B Engine Oil Pressure Sensor ((L83/L86)+MYC)* • *B37B Engine Oil Pressure Sensor (L86+M5U)* • *B37B Engine Oil Pressure Sensor (L96)*
B37B	Engine Oil Pressure Sensor	L96	In the engine compartment, top of the engine, below throttle body	• *Left Side of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	• *B37B Engine Oil Pressure Sensor ((L83/L86)+MYC)* • *B37B Engine Oil Pressure Sensor (L86+M5U)* • *B37B Engine Oil Pressure Sensor (L96)*
B39	A/C Evaporator Temperature Sensor	—	In the passenger compartment, part of HVAC module, behind the instrument panel	*Back of HVAC Assembly Components*	—
B46B	Fuel Level Sensor - Secondary	L96	Under the vehicle, at the rear of the vehicle, inside the rear fuel tank, part of A6D fuel pump and level sensor - Secondary	—	—

B46	Fuel Level Sensor	—	Under the vehicle, inside the fuel tank, part of A6 fuel pump and level sensor	—	—
B47	Fuel Pressure Sensor	—	On the vehicle underbody, on the fuel line, near the transmission crossmember mount	—	—
B52C	Heated Oxygen Sensor - Bank 1 Sensor 1	—	On the vehicle underbody, near the top left side of the transmission	• *Heated Oxygen Sensors (L83 or L86)* • *Heated Oxygen Sensors (L96)*	*B52C Heated Oxygen Sensor - Bank 1 Sensor 1*
B52D	Heated Oxygen Sensor - Bank 1 Sensor 2	—	On the vehicle underbody, near the left frame rail downstream from the catalytic converter	• *Heated Oxygen Sensors (L96)* • *Heated Oxygen Sensors (L83 or L86)*	*B52D Heated Oxygen Sensor - Bank 1 Sensor 2*
B52E	Heated Oxygen Sensor - Bank 2 Sensor 1	—	On the vehicle underbody, near the right frame rail even with the catalytic converter	• *Heated Oxygen Sensors (L83 or L86)* • *Heated Oxygen Sensors (L96)*	• *B52E Heated Oxygen Sensor - Bank 2 Sensor 1 ((L83/L86)+MYC)* • *B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L86+M5U)* • *B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L96)*
B52F	Heated Oxygen Sensor - Bank 2 Sensor 2	—	On the vehicle underbody, near the right frame rail downstream from the catalytic converter	• *Heated Oxygen Sensors (L83 or L86)* • *Heated Oxygen Sensors (L96)*	*B52F Heated Oxygen Sensor - Bank 2 Sensor 2*
B55	Hood Ajar Switch	L96	In the front of the engine compartment, part of the hood latch	• *Behind Front Fascia Components (Z75)* • *Behind Front Fascia Components (X88/Z88)*	*B55 Engine Hood Switch*
B55	Hood Ajar Switch	L83 or L86	In the front of the engine compartment, part of the hood latch	• *Behind Front Fascia Components (Z75)* • *Behind Front Fascia Components (X88/Z88)*	*B55 Engine Hood Switch*
B59L	Front Impact Sensor - Left	—	At the front of the vehicle, behind the front fascia, left of center, behind the bumper beam	• *Behind Front Fascia Components (Z75)* • *Behind Front Fascia Components (X88/Z88)*	*B59L Front Impact Sensor - Left*
B59R	Front Impact Sensor - Right	—	At the front of the vehicle, behind the front fascia, right of center, behind the bumper beam	• *Behind Front Fascia Components (X88/Z88)* • *Behind Front Fascia Components (Z75)*	*B59R Front Impact Sensor - Right*
B61P	Seat Belt Tension Sensor - Passenger	—	In the passenger compartment, right side, at the base of the B-pillar	—	*B61P Seat Belt Tension Sensor - Passenger*
B62D	Seat Position Sensor - Driver	—	In the passenger compartment, right front corner of the driver seat track assembly	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	*B62D Seat Position Sensor - Driver*
B63LF	Side Impact Sensor - Left Front	—	In the driver door, behind the trim panel, toward the rear of the door	• *Driver Door Components (X88 or Z88)* • *Driver Door Components (Z75)*	*B63LF Side Impact Sensor - Left Front*

B63LR	Side Impact Sensor - Left Rear	—	Behind the left rear door, near the jam, underneath the trim panel, left of the second row left seat.	*Left Front of Passenger Compartment Views (Z75)* *Left Rear of Passenger Compartment Views (Z75)*	*B63LR Side Impact Sensor - Left Rear*
B63RF	Side Impact Sensor - Right Front	—	In the passenger door, behind the trim panel, toward the rear of the door	*Passenger Door Components (X88 or Z88)* *Passenger Door Components (Z75)*	*B63RF Side Impact Sensor - Right Front*
B63RR	Side Impact Sensor - Right Rear	—	Behind the right rear door, near the jam, underneath the trim panel, right of the second row right seat.	—	*B63RR Side Impact Sensor - Right Rear*
B67A	Ultrasonic Intrusion Sensor 1	UTT	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—
B67B	Ultrasonic Intrusion Sensor 2	UTT	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—
B67C	Ultrasonic Intrusion Sensor 3	UTT	In the passenger compartment, at the front of the roof, in the overhead console, part of the Content Theft Deterrent Sensor Module	—	—
B68A	Knock Sensor 1	—	In the engine compartment, on the left side of the engine, near the back, below the cylinder head	*Left Side of Engine Components (L83 or L86)*	*B68A Knock Sensor 1 ((L83/L86)+MYC)* *B68A Knock Sensor 1 (L86+M5U)* *B68A Knock Sensor 1 (L96)*
B68B	Knock Sensor 2	—	In the engine compartment, on the right side of the engine, near the back, below the cylinder head	*Right Rear Side of Engine Components (L96)* *Right Rear Side of Engine Components (L83 or L86)*	*B68B Knock Sensor 2 ((L83/L86)+MYC)* *B68B Knock Sensor 2 (L86+M5U)* *B68B Knock Sensor 2 (L96)*
B70	Liftgate Close Switch	TB5 or TC2	In the passenger compartment, at the bottom of the liftgate, behind the liftgate trim.	*Liftgate Components*	*B70 Liftgate Close Switch*
B71L	Liftgate Object Sensor - Left	TB5 or TC2	At the rear of the vehicle, along the left edge of the liftgate	*Liftgate Components*	*B71L Liftgate Object Sensor - Left*
B71R	Liftgate Object Sensor - Right	TB5 or TC2	At the rear of the vehicle, along the right edge of the liftgate	*Liftgate Components*	*B71R Liftgate Object Sensor - Right*
B74	Manifold Absolute Pressure Sensor	L83 or L86	In the engine compartment, on the top of the intake manifold, left of the throttle body	*Left Side of Engine Components (L83 or L86)* *Left Rear Side of Engine Components (L96)*	*B74 Manifold Absolute Pressure Sensor ((L83/L86)+MYC)* *B74 Manifold Absolute Pressure Sensor (L86+M5U)* *B74 Manifold Absolute Pressure Sensor (L96)*
B74	Manifold Absolute Pressure Sensor	L96	In the engine compartment, on the top of the engine, behind the throttle body	*Left Side of Engine Components (L83 or L86)* *Left Rear Side of Engine Components (L96)*	*B74 Manifold Absolute Pressure Sensor ((L83/L86)+MYC)* *B74 Manifold Absolute Pressure Sensor (L86+M5U)* *B74 Manifold Absolute Pressure Sensor (L96)*

B75C	Multifunction Intake Air Sensor	—	Right side of the engine compartment, in the air intake duct, near the air cleaner	• *Right Rear Side of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*B75C Multifunction Intake Air Sensor*
B77LF	Radio Volume Compensator Interior Noise Microphone - Left Front	NKC	In the passenger compartment, on the left side of the headliner, at the over head grab handle	*Headliner Components*	*B77LF Radio Volume Compensator Interior Noise Microphone - Left Front*
B77R	Radio Volume Compensator Interior Noise Microphone - Rear	NKC	In the passenger compartment, at the rear of the headliner	*Headliner Components*	*B77R Radio Volume Compensator Interior Noise Microphone - Rear*
B77RF	Radio Volume Compensator Interior Noise Microphone - Right Front	NKC	In the passenger compartment, on the right side of the headliner, at the over head grab handle	• *Headliner Components* • *Headliner Components*	*B77RF Radio Volume Compensator Interior Noise Microphone - Right Front*
B80	Park Brake Switch	without J71	In the passenger compartment, at the left side of the Driver Footwell, on top of brake pedal assembly	*Left Front of Passenger Compartment Views (Z75)*	*B80 Park Brake Switch*
B81B	Park Position Switch	—	In the passenger compartment, on the steering column near the base of the shifter	*Steering Column Components (2 of 2)*	*B81B Park Position Switch*
B87	Rearview Camera	—	At the rear of the vehicle, on the outside of the liftgate, in the license plate bezel	• *Rear of Vehicle Components (Z75)* • *Rear of Vehicle Components (X88)* • *Rear of Vehicle Components (Z88)*	• *B87 Rearview Camera X1 (UVC)* • *B87 Rearview Camera X2 (DRZ)*
B88D	Seat Belt Switch - Driver	—	In the passenger compartment, part of the driver seat belt buckle	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	*B88D Seat Belt Switch - Driver*
B88P	Seat Belt Switch - Passenger	—	In the passenger compartment, part of the passenger front seat belt buckle	*Passenger Seat Cushion Components (without ULT)*	*B88P Seat Belt Switch - Passenger*
B99	Steering Wheel Angle Sensor	—	In the passenger compartment, near the base of the steering column, near the floor	*Steering Column Components (1 of 2)*	*B99 Steering Wheel Angle Sensor*
B107	Accelerator Pedal Position Sensor	—	In the passenger compartment, on the driver floor board above the accelerator pedal	*Behind Left Side of Instrument Panel Components (1 of 2)*	*B107 Accelerator Pedal Position Sensor*
B115	Vehicle Speed Sensor	NP0 or NQH	Under the vehicle, center, forward of middle, on top of transfer case	*Transfer Case Components (NP0 or NQH)*	*B115 Vehicle Speed Sensor*
B118B	Windshield Washer Fluid Level Switch	—	In the engine compartment, left front, on the bottom of the washer reservoir bottle	• *Left Front Corner of Vehicle Components* • *Left Side of Engine Compartment Component View*	*B118B Windshield Washer Fluid Level Switch*
B119	Multi-axis Acceleration Sensor	UGN	In the passenger compartment, under floor console, next to the Inflatable Restraint Sensing and Diagnostic Module	*Front Center of The Passenger Compartment Components*	*B119 Multi-axis Acceleration Sensor*
B124LR	Folding Seat Back Position Switch - 2nd Row Left	ATN or ATT	In the passenger compartment, part of the left second row seat, located below the outboard seat back hinge	*2nd Row Left Bucket Seat Components (ATN)*	*B124LR Folding Seat Back Position Switch - 2nd Row Left*
B124RR	Folding Seat Back Position Switch - 2nd Row Right	ATN or ATT	In the passenger compartment, part of the right second row seat, located below the outboard seat back hinge	*2nd Row Right Bucket Seat Components (ATN)*	*B124RR Folding Seat Back Position Switch - 2nd Row Right*

B137B	Power Steering Shaft Torque/Position Sensor	—	Under the vehicle, near the steering gear assembly	—	—
B150	Fuel Tank Pressure Sensor	—	Under the vehicle, at the rear, mounted to the EVAP cannister	*Chassis Components View*	*B150 Fuel Tank Pressure Sensor*
B152LF	Suspension Position Sensor - Left Front	Z95	Outside the vehicle, at the left front corner, rear side of the strut tower	—	*B152LF Suspension Position Sensor - Left Front*
B152LR	Suspension Position Sensor - Left Rear	Z95	Outside the vehicle, at the left rear corner, above the upper control arm mount to the frame rail	*Chassis Components View*	*B152LR Suspension Position Sensor - Left Rear*
B152RF	Suspension Position Sensor - Right Front	Z95	Outside the vehicle, at the right front corner, rear side of the strut tower	—	*B152RF Suspension Position Sensor - Right Front*
B152RR	Suspension Position Sensor - Right Rear	Z95	Outside the vehicle, at the right rear corner, above the upper control arm mount to the frame rail	• *Chassis Components View* • *Chassis Components View*	*B152RR Suspension Position Sensor - Right Rear*
B159L	Glass Breakage Sensor - Left	UTT	In the rear compartment, left side, underneath rear quarter glass window	*Left Rear Cargo Area Components*	• *B159L Glass Breakage Sensor - Left (UTV+SWB)* • *B159L Glass Breakage Sensor - Left (UTV-SWB)*
B159R	Glass Breakage Sensor - Right	UTT	In the rear compartment, right side, underneath rear quarter glass window	*Right Rear Cargo Area Components*	• *B159R Glass Breakage Sensor - Right (UTT/UTV+SWB)* • *B159R Glass Breakage Sensor - Right (UTV-SWB)*
B165	Content Theft Deterrent Sensor Module	UTT	In the passenger compartment, at the front of the roof, in the overhead console	—	*B165 Content Theft Deterrent Sensor Module*
B174G	Frontview Camera - Grille	UVH	At the front of the vehicle, center, in the upper grille	—	—
B174W	Frontview Camera - Windshield	UFL, UHX, or UGN	In the passenger compartment, at the top middle of the windshield	*Overhead Console Components*	*B174W Frontview Camera - Windshield*
B196	Air Suspension Pressure Sensor	Z85 or Z95	under the vehicle, at the left rear, part of the level ride compressor	—	—
B198	Fuel Composition Sensor	FHS	Under the vehicle, between the fuel tank and the electronic brake control module, on the main fuel line	—	*B198 Fuel Composition Sensor*
B200	Rain Sensor Module	—	In the passenger compartment, at the top middle of the windshield	—	—
B218L	Side Object Sensor Module - Left	UKC	At the left rear corner of the vehicle, mounted to the inside of the rear fascia	*Behind Rear Fascia Components*	*B218L Side Object Sensor Module - Left*
B218R	Side Object Sensor Module - Right	UKC	At the right rear corner of the vehicle, mounted to the inside of the rear fascia	*Behind Rear Fascia Components*	*B218R Side Object Sensor Module - Right*
B225L	Sideview Camera - Left	UVH	Outside the vehicle, in the left outside rearview mirror	—	—
B225R	Sideview Camera - Right	UVH	Outside the vehicle, in the right outside rearview mirror	—	—
B227	Gear Position Sensor	NP0 or NQH	Under the vehicle, on the top rear of the transfer case	*Transfer Case Components (NP0 or NQH)*	*B227 Gear Position Sensor*

B233B	Radar Sensor Module - Long Range	—	At the front of the vehicle, mounted in the center of the upper grille	*Front of Vehicle Components (Z75)*	*B233B Radar Sensor Module - Long Range*
B233LF	Radar Sensor Module - Short Range Left Front	UVZ	At the front of the vehicle, mounted to the inside left of the front fascia	—	*B233LF Radar Sensor Module - Short Range Left Front*
B233LR	Radar Sensor Module - Short Range Left Rear	UVZ	At the rear of the vehicle, mounted to the inside of the rear fascia left of center	*Behind Rear Fascia Components*	*B233LR Radar Sensor Module - Short Range Left Rear*
B233RF	Radar Sensor Module - Short Range Right Front	UVZ	At the front of the vehicle, mounted to the inside right of the front fascia	—	*B233RF Radar Sensor Module - Short Range Right Front*
B233RR	Radar Sensor Module - Short Range Right Rear	UVZ	At the rear of the vehicle, mounted to the inside of the rear fascia right of center	*Behind Rear Fascia Components*	*B233RR Radar Sensor Module - Short Range Right Rear*
B275A	Hands-Free Liftgate Sensor - Upper	TC2	At the rear of the vehicle, center, mounted to the underside of the rear bumper, above trailer hitch	—	—
B275B	Hands-Free Liftgate Sensor - Lower	TC2	At the rear of the vehicle, center, mounted to the underside of the rear bumpe, below trailer hitch	—	—
B306A	Parking Assist Sensor - Front Left Outer	UD5	At the front of the vehicle, mounted in the front bumper	• *Front of Vehicle Components (Z75)* • *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*B306A Parking Assist Sensor - Front Left Outer*
B306B	Parking Assist Sensor - Front Left Middle	UD5	At the front of the vehicle, mounted in the front bumper	• *Front of Vehicle Components (Z75)* • *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*B306B Parking Assist Sensor - Front Left Middle*
B306C	Parking Assist Sensor - Front Right Middle	UD5	At the front of the vehicle, mounted in the front bumper	• *Front of Vehicle Components (Z75)* • *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*B306C Parking Assist Sensor - Front Right Middle*
B306D	Parking Assist Sensor - Front Right Outer	UD5	At the front of the vehicle, mounted in the front bumper	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)* • *Front of Vehicle Components (Z75)*	*B306D Parking Assist Sensor - Front Right Outer*
B306E	Parking Assist Sensor - Rear Left Outer	UD5 or UD7	At the rear of the vehicle, mounted in the rear bumper	• *Rear of Vehicle Components (X88)* • *Rear of Vehicle Components (Z88)* • *Rear of Vehicle Components (Z75)*	*B306E Parking Assist Sensor - Rear Left Outer*
B306F	Parking Assist Sensor - Rear Left Middle	UD5 or UD7	At the rear of the vehicle, mounted in the rear bumper	• *Rear of Vehicle Components (Z88)* • *Rear of Vehicle Components (Z75)* • *Rear of Vehicle Components (X88)*	*B306F Parking Assist Sensor - Rear Left Middle*
B306G	Parking Assist Sensor - Rear Right Middle	UD5 or UD7	At the rear of the vehicle, mounted in the rear bumper	• *Rear of Vehicle Components (X88)* • *Rear of Vehicle Components (Z75)* • *Rear of Vehicle Components (Z88)*	*B306G Parking Assist Sensor - Rear Right Middle*

B306H	Parking Assist Sensor - Rear Right Outer	UD5 or UD7	At the rear of the vehicle, mounted in the rear bumper	● *Rear of Vehicle Components (X88)* ● *Rear of Vehicle Components (Z75)* ● *Rear of Vehicle Components (Z88)*	*B306H Parking Assist Sensor - Rear Right Outer*
B306K	Parking Assist Sensor - Side Left Front	UKG	At the front of the vehicle, mounted in the front bumper	*Front of Vehicle Components (Z75)*	*B306K Parking Assist Sensor - Side Left Front (UKG)*
B306L	Parking Assist Sensor - Side Right Front	UKG	At the front of the vehicle, mounted in the front bumper	*Front of Vehicle Components (Z75)*	*B306L Parking Assist Sensor - Side Right Front (UKG)*
B306M	Parking Assist Sensor - Side Left Rear	UKG	At the rear of the vehicle, mounted in the rear bumper	*Rear of Vehicle Components (Z75)*	*B306M Parking Assist Sensor - Side Left Rear*
B306N	Parking Assist Sensor - Side Right Rear	UKG	At the rear of the vehicle, mounted in the rear bumper	*Rear of Vehicle Components (Z75)*	*B306N Parking Assist Sensor - Side Right Rear*
B310	Fuel Pressure/Temperature Sensor	L86 or L83	In the engine compartment, mounted to the left rear of engine fuel injector rail	*Top of Engine Components (L83 or L86)*	—
C1B	Battery - Auxiliary	5W4 or 9C1	In the engine compartment, on the left side, forward of the underhood fuse block	*Left Side of Engine Compartment Component View*	—
C1	Battery	—	In the engine compartment, on the left side, near the underhood fuse block	*Right Rear of Engine Compartment Components (1 of 2)*	—
E1A	Accent Lamp - Driver Seat	AN3 or A95	In the passenger compartment, under the driver seat	● *Driver Seat Cushion Components (ULT)* ● *Driver Seat Cushion Components (without ULT)*	*E1A Accent Lamp - Driver Seat*
E1AA	Floor Accent Lamp - Left Front	—	In the passenger compartment, under the left side of the instrument panel	● *Back of Instrument Panel Components (Z75)* ● *Back of Instrument Panel Components (X88/Z88 without D07/DCK)* ● *Back of Instrument Panel Components (X88/Z88 with D07/DCK)*	*E1AA Floor Accent Lamp - Left Front*
E1AB	Floor Accent Lamp - Right Front	—	In the passenger compartment, under the right side of the instrument panel	● *Back of Instrument Panel Components (X88/Z88 without D07/DCK)* ● *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* ● *Back of Instrument Panel Components (Z75)*	*E1AB Floor Accent Lamp - Right Front*
E1B	Accent Lamp - Passenger Seat	AN3 or A95	In the passenger compartment, under the passenger seat	● *Passenger Seat Cushion Components (without ULT)* ● *Passenger Seat Cushion Components (ULT)*	*E1B Accent Lamp - Passenger Seat*
E1C	Accent Lamp - Driver Door Handle	—	In the passenger compartment, forward of center, left side, on the driver door, near the door handle	● *Driver Door Components (Z75)* ● *Driver Door Components (X88 or Z88)*	*E1C Accent Lamp - Driver Door Handle*
E1D	Accent Lamp - Driver Door	Z75	In the passenger compartment, forward of center, left side, on the driver door, in the arm rest	*Driver Door Components (Z75)*	*E1D Accent Lamp - Driver Door (Z75)*

E1E	Accent Lamp - Left Rear Door Handle	—	In the passenger compartment, rearward of center, left side, on the left rear door, near the door handle	• *Right Rear Door Components (X88 or Z88)* • *Left Rear Door Components (X88 or Z88)* • *Left Rear Door Components (Z75)*	• *E1E Accent Lamp - Left Rear Door Handle (X88/Z88)* • *E1E Accent Lamp - Left Rear Door Handle (Z75)*
E1F	Accent Lamp - Right Rear Door Handle	—	In the passenger compartment, rearward of center, right side, on the right rear door, near the door handle	*Right Rear Door Components (Z75)*	• *E1F Accent Lamp - Right Rear Door Handle (X88/Z88)* • *E1F Accent Lamp - Right Rear Door Handle (Z75)*
E1LR	Accent Lamp - Left Rear Door	Z75	In the passenger compartment, rearward of center, left side, on the left rear door, above the door handle	*Left Rear Door Components (Z75)*	*E1LR Accent Lamp - Left Rear Door*
E1M	Accent Lamp - Passenger Door Handle	—	In the passenger compartment, forward of center, right side, on the passenger door, near the door handle	• *Passenger Door Components (X88 or Z88)* • *Passenger Door Components (Z75)*	*E1M Accent Lamp - Passenger Door Handle*
E1P	Accent Lamp - Passenger Door	Z75	In the passenger compartment, forward of center, right side, on the passenger door, in the arm rest	*Passenger Door Components (Z75)*	*E1P Accent Lamp - Passenger Door (Z75)*
E1RR	Accent Lamp - Right Rear Door	Z75	In the passenger compartment, rearward of center, right side, on the right rear door, above the door handle	*Right Rear Door Components (Z75)*	*E1RR Accent Lamp - Right Rear Door*
E2LF	Side Marker Lamp - Left Front	—	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z75)* • *Headlamp Components (Z88)* • *Headlamp Components (Z88)*	—
E2RF	Side Marker Lamp - Right Front	—	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z75)*	—
E4A	Cornering Lamp - Left	Z75	At the front left corner of the vehicle, in the front fascia, in the multifunction lamp assembly	—	—
E4AC	Park/Daytime Running Lamp - Left	X88 or Z88	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z88)*	—
E4AD	Park/Daytime Running Lamp - Right	X88 or Z88	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z88)*	—
E4AL	Park/Daytime Running Lamp - Left Lower	Z75	At the front left corner of the vehicle, in the front fascia, in the multifunction lamp assembly	*Front of Vehicle Components (Z75)*	—
E4AM	Park/Daytime Running Lamp - Right Lower	Z75	At the front right corner of the vehicle, in the front fascia, in the multifunction lamp assembly	*Front of Vehicle Components (Z75)*	—
E4B	Cornering Lamp - Right	Z75	At the front right corner of the vehicle, in the front fascia, in the multifunction lamp assembly	—	—
E4C	Daytime Running Lamp - Left	Z75	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	*Headlamp Components (Z75)*	—

E4D	Daytime Running Lamp - Right	Z75	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	*Headlamp Components (Z75)*	—
E4E	Headlamp - Left High Beam	X88 or Z88	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (Z88)* • *Headlamp Components (Z75)* • *Headlamp Components (X88)*	—
E4E	Headlamp - Left High Beam	Z75	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (Z88)* • *Headlamp Components (Z75)* • *Headlamp Components (X88)*	—
E4F	Headlamp - Right High Beam	X88 or Z88	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (Z75)* • *Headlamp Components (X88)* • *Headlamp Components (Z88)*	—
E4F	Headlamp - Right High Beam	Z75	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (Z75)* • *Headlamp Components (X88)* • *Headlamp Components (Z88)*	—
E4G	Headlamp - Left Low Beam	X88 or Z88	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z88)* • *Headlamp Components (Z75)*	—
E4G	Headlamp - Left Low Beam	Z75	At the left front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z88)* • *Headlamp Components (Z75)*	—
E4H	Headlamp - Right Low Beam	X88 or Z88	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z75)* • *Headlamp Components (Z88)*	—
E4H	Headlamp - Right Low Beam	Z75	At the right front corner of the vehicle, inside the headlamp assembly, part of the headlamp assembly	• *Headlamp Components (X88)* • *Headlamp Components (Z75)* • *Headlamp Components (Z88)*	—
E4J	Park Lamp - Left Front	X88 without Y91	At the left front corner of the vehicle, inside the headlamp assembly	*Headlamp Components (X88)*	—
E4K	Park Lamp - Right Front	X88 without Y91	At the right front corner of the vehicle, inside the headlamp assembly	*Headlamp Components (X88)*	—
E4LF	Turn Signal Lamp - Left Front	X88 or Z88	At the left front corner of the vehicle, inside the headlamp assembly	• *Headlamp Components (X88)* • *Front of Vehicle Components (Z75)*	—
E4LF	Turn Signal Lamp - Left Front	Z75	At the front left corner of the vehicle, in the front fascia, in the multifunction lamp assembly	• *Headlamp Components (X88)* • *Front of Vehicle Components (Z75)*	—

E4LR	Turn Signal Lamp - Left Rear	Z88, Z75, or X88 with T89	At the left rear corner of the vehicle, inside the tail lamp assembly	• *Tail Lamp Components (X88)* • *Tail Lamp Components (Z88)* • *Tail Lamp Components (Z75)*	—
E4RF	Turn Signal Lamp - Right Front	X88 or Z88	At the right front corner of the vehicle, inside the headlamp assembly	• *Front of Vehicle Components (Z75)* • *Headlamp Components (X88)*	—
E4RF	Turn Signal Lamp - Right Front	Z75	At the front right corner of the vehicle, in the front fascia, in the multifunction lamp assembly	• *Front of Vehicle Components (Z75)* • *Headlamp Components (X88)*	—
E4RR	Turn Signal Lamp - Right Rear	Z88, Z75, or X88 with T89	At the right rear corner of the vehicle, inside the tail lamp assembly	• *Tail Lamp Components (Z88)* • *Tail Lamp Components (Z75)* • *Tail Lamp Components (X88)*	—
E4Y	Turn Signal Repeater Lamp - Left	DL3	At the front of the Left front door, part of the Outside Rearview Mirror, part of the mirror glass	*Door Mirror Components*	—
E4Y	Turn Signal Repeater Lamp - Left	DR4	At the front of the Left front door, part of the Outside Rearview Mirror	*Door Mirror Components*	—
E4Z	Turn Signal Repeater Lamp - Right	DL3	At the front of the Right front door, part of the Outside Rearview Mirror, part of the mirror glass	*Door Mirror Components*	—
E4Z	Turn Signal Repeater Lamp - Right	DR4	At the front of the Right front door, part of the Outside Rearview Mirror	*Door Mirror Components*	—
E5A	Backup Lamp - Left	X88 or Z88	At the left rear corner of the vehicle, inside the tail lamp assembly	• *Tail Lamp Components (X88)* • *Tail Lamp Components (Z75)* • *Tail Lamp Components (Z88)*	—
E5A	Backup Lamp - Left	Z75	At the left rear corner of the vehicle, inside the tail lamp assembly, part of the tail lamp assembly	• *Tail Lamp Components (X88)* • *Tail Lamp Components (Z75)* • *Tail Lamp Components (Z88)*	—
E5AS	Stop/Turn Signal Lamp - Left Upper	X88 without T89	At the left rear corner of the vehicle, inside the tail lamp assembly	*Tail Lamp Components (X88)*	—
E5AT	Stop/Turn Signal Lamp - Left Lower	X88 without T89	At the left rear corner of the vehicle, inside the tail lamp assembly	*Tail Lamp Components (X88)*	—
E5AU	Stop/Turn Signal Lamp - Right Upper	X88 without T89	At the right rear corner of the vehicle, inside the tail lamp assembly	*Tail Lamp Components (X88)*	—
E5AV	Stop/Turn Signal Lamp - Right Lower	X88 without T89	At the right rear corner of the vehicle, inside the tail lamp assembly	*Tail Lamp Components (X88)*	—
E5B	Backup Lamp - Right	X88 or Z88	At the right rear corner of the vehicle, inside the tail lamp assembly	• *Tail Lamp Components (Z88)* • *Tail Lamp Components (Z75)* • *Tail Lamp Components (X88)*	—

E5B	Backup Lamp - Right	Z75	At the right rear corner of the vehicle, inside the tail lamp assembly, part of the tail lamp assembly	- *Tail Lamp Components (Z88)* - *Tail Lamp Components (Z75)* - *Tail Lamp Components (X88)*	—
E5E	Tail Lamp - Left	—	At the left rear corner of the vehicle, inside the tail lamp assembly	- *Tail Lamp Components (X88)* - *Tail Lamp Components (Z88)* - *Tail Lamp Components (Z75)*	—
E5F	Tail Lamp - Right	—	At the right rear corner of the vehicle, inside the tail lamp assembly	- *Tail Lamp Components (X88)* - *Tail Lamp Components (Z88)* - *Tail Lamp Components (Z75)*	—
E5L	Stop Lamp - Left	Z88, Z75, or X88 with T89	At the left rear corner of the vehicle, inside the tail lamp assembly	- *Tail Lamp Components (Z88)* - *Tail Lamp Components (Z75)* - *Tail Lamp Components (X88)*	—
E5R	Stop Lamp - Right	Z88, Z75, or X88 with T89	At the right rear corner of the vehicle, inside the tail lamp assembly	- *Tail Lamp Components (Z88)* - *Tail Lamp Components (Z75)* - *Tail Lamp Components (X88)*	—
E6	Center High Mounted Stop Lamp	—	At the rear of the vehicle, center, mounted above the liftgate window	- *Rear of Vehicle Components (X88)* - *Rear of Vehicle Components (Z88)* - *Rear of Vehicle Components (Z75)*	*E6 Center High Mounted Stop Lamp*
E7L	License Plate Lamp - Left	—	At the rear of the vehicle, near center, mounted above the license plate mount	- *Rear of Vehicle Components (X88)* - *Rear of Vehicle Components (Z75)* - *Rear of Vehicle Components (Z88)*	*E7L License Plate Lamp - Left*
E7R	License Plate Lamp - Right	—	At the rear of the vehicle, near center, mounted above the license plate mount	- *Rear of Vehicle Components (X88)* - *Rear of Vehicle Components (Z88)* - *Rear of Vehicle Components (Z75)*	*E7R License Plate Lamp - Right*
E8A	Door Sill Plate Lamp - Driver	Z75	In the passenger compartment, forward of center, left, at the bottom of the driver door opening on the sill	*Left Front of Passenger Compartment Views (Z75)*	*E8A Door Sill Plate Lamp - Driver*
E8B	Door Sill Plate Lamp - Passenger	Z75	In the passenger compartment, forward of center, right, at the bottom of the passenger door opening on the sill	—	*E8B Door Sill Plate Lamp - Passenger*
E8Q	Door Sill Plate Lamp - Left Rear	Z75	In the passenger compartment, forward of center, left, at the bottom of the left rear door opening on the sill	*Left Rear of Passenger Compartment Views (Z75)*	*E8Q Door Sill Plate Lamp - Left Rear*
E8R	Door Sill Plate Lamp - Right Rear	Z75	In the passenger compartment, forward of center, right, at the bottom of the right rear door opening on the sill	—	*E8R Door Sill Plate Lamp - Right Rear*
E8XA	Door Handle Courtesy Lamp - Driver Exterior	HD7	On the outside of the vehicle, left side, rear of driver door, part of the door handle assembly	—	—

E8XB	Door Handle Courtesy Lamp - Passenger Exterior	HD7	On the outside of the vehicle, right side, rear of passenger door, part of the door handle assembly	—	—
E8XC	Door Handle Courtesy Lamp - Left Rear Exterior	HD7	On the outside of the vehicle, left side, rear of left rear door, part of the door handle assembly	—	—
E8XD	Door Handle Courtesy Lamp - Right Rear Exterior	HD7	On the outside of the vehicle, right side, rear of right rear door, part of the door handle assembly	—	—
E8YD	Outside Rearview Mirror Courtesy Lamp - Driver	DL3	At the front of the Left front door, bottom of the Outside Rearview Mirror	• *Door Mirror Components* • *Front of Vehicle Components (Z75)*	—
E8YP	Outside Rearview Mirror Courtesy Lamp - Passenger	DL3	At the front of the Right front door, bottom of the Outside Rearview Mirror	• *Front of Vehicle Components (Z75)* • *Door Mirror Components*	—
E8ZL	Running Board Step Courtesy Lamp - Left	BRS	Outside of vehicle, left side, under the rocker, mounted in the running board	—	—
E8ZR	Running Board Step Courtesy Lamp - Right	BRS	Outside of vehicle, right side, under the rocker, mounted in the running board	—	—
E13LA	Headlamp Assembly - Left	—	At the left front corner of the vehicle	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)* • *Front of Vehicle Components (Z75)*	—
E13RA	Headlamp Assembly - Right	—	At the right front corner of the vehicle	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)* • *Front of Vehicle Components (Z75)*	—
E14A	Seat Heating Element - Driver Back	KA1 or KB6	In the passenger compartment, in the driver seat back	*Driver Seat Back Components*	• *E14A Seat Heating Element - Driver Back (X88/Z88+KQV)* • *E14A Seat Heating Element - Driver Back (Z75+KB6)*
E14B	Seat Heating Element - Driver Cushion	KA1 or KB6	In the passenger compartment, part of the driver seat cushion	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	• *E14B Seat Heating Element - Driver Cushion (X88/Z88+KQV)* • *E14B Seat Heating Element - Driver Cushion (Z75+KB6)*
E14C	Seat Heating Element - Passenger Back	KA1 or KB6	In the passenger compartment, in the passenger seat back	*Passenger Seat Components View*	• *E14C Seat Heating Element - Passenger Back (X88/Z88+KQV)* • *E14C Seat Heating Element - Passenger Back (Z75+KB6)*
E14D	Seat Heating Element - Passenger Cushion	KA1 or KB6	In the passenger compartment, part of the passenger seat cushion	*Passenger Seat Cushion Components (without ULT)*	• *E14D Seat Heating Element - Passenger Cushion (KB6+Z75+ULT)* • *E14D Seat Heating Element - Passenger Cushion (KB6+Z75-ULT)* • *E14D Seat Heating Element - Passenger Cushion (X88/Z88+KQV)*

E14F	Seat Heating Element - Left Rear Cushion	KA6	In the passenger compartment, in the 2nd row seat, left cushion	• *2nd Row Seat Cushions Components (ATT)* • *2nd Row Left Bucket Seat Components (ATN)*	• *E14F Seat Heating Element - Left Rear Cushion (X88/Z88+KA6)* • *E14F Seat Heating Element - Left Rear Cushion (Z75+KA6)*
E14H	Seat Heating Element - Right Rear Cushion	KA6	In the passenger compartment, in the 2nd row seat, right cushion	• *2nd Row Seat Cushions Components (ATT)* • *2nd Row Right Bucket Seat Components (ATN)*	• *E14H Seat Heating Element - Right Rear Cushion (X88/Z88+KA6)* • *E14H Seat Heating Element - Right Rear Cushion (Z75+KA6)*
E15	Steering Wheel Heater	UVD	In the passenger compartment, in the steering wheel.	—	—
E17D	Outside Rearview Mirror Glass - Driver	—	Outside of the vehicle, left side, forward on the driver door, inside the outside rear view mirror	—	—
E17P	Outside Rearview Mirror Glass - Passenger	—	Outside of the vehicle, right side, forward on the passenger door, inside the outside rear view mirror	—	—
E18	Rear Defogger Grid	—	In the passenger compartment, on the inside of the liftgate window	*Rear of Vehicle Components (Z75)*	• *E18 Rear Defogger Grid X1* • *E18 Rear Defogger Grid X2*
E28	Center Console Compartment Lamp	D07 without DCK	In the passenger compartment, inside the center console compartment	• *Center Console Internal Component Views (X88/Z88)* • *Center Console Top Component Views (Z75)*	*E28 Center Console Compartment Lamp*
E29LF	Fog Lamp - Left Front	T3U	At the left front corner of the vehicle, in the front bumper	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*E29LF Fog Lamp - Left Front (X88)*
E29LR	Fog Lamp - Left Rear	T79	At the left rear corner of the vehicle, in the rear fascia	—	• *E29LR Fog Lamp - Left Rear (X88)* • *E29LR Fog Lamp - Left Rear (Z75)*
E29RF	Fog Lamp - Right Front	T3U	At the right front corner of the vehicle, in the front bumper	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*E29RF Fog Lamp - Right Front (X88)*
E29RR	Fog Lamp - Right Rear	T79	At the right rear corner of the vehicle, in the rear fascia	—	• *E29RR Fog Lamp - Right Rear (X88)* • *E29RR Fog Lamp - Right Rear (Z75)*
E31L	Sunshade Mirror Lamp - Left	—	In the passenger compartment, on the left sunshade	*Overhead Console Components*	*E31L Sunshade Mirror Lamp - Left*
E31R	Sunshade Mirror Lamp - Right	—	In the passenger compartment, on the right sunshade	*Overhead Console Components*	*E31R Sunshade Mirror Lamp - Right*
E32	Cigarette Lighter Receptacle	DT4 with AZ3	In the passenger compartment, center of instrument panel, below P17 Info Display	—	—
E32	Cigarette Lighter Receptacle	DT4 with D07 or DCK	In the passenger compartment, on top of the floor console, below P17 Info Display	—	—

E35L	Exterior Spot Lamp - Left	7X6 or 7X7	In the passenger compartment, forward, top left corner of the instrument panel near the A-Pillar	• *Back of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)*	*E35L Exterior Spot Lamp - Left*
E35R	Exterior Spot Lamp - Right	7X7	In the passenger compartment, forward, top right corner of the instrument panel near the A-Pillar	• *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 without D07/DCK)*	*E35R Exterior Spot Lamp - Right*
E36AH	Dome Lamp	without SWB	In the rear compartment, near center, overhead, in the headliner	—	*E36AH Dome Lamp*
E37B	Dome/Reading Lamps - 2nd Row	without U42	In the passenger compartment, overhead, in the headliner between the front and second row seating	*Headliner Components*	*E37B Dome/Reading Lamps - 2nd Row*
E37B	Dome/Reading Lamps - 2nd Row	U42	In the passenger compartment, overhead, in the headliner between the front and second row seating, part of the second row video display	*Headliner Components*	*E37B Dome/Reading Lamps - 2nd Row*
E37C	Dome/Reading Lamps - 3rd Row	without DNU	In the passenger compartment, overhead, in the headliner behind the second row seating	*Headliner Components*	*E37C Dome/Reading Lamps - 3rd Row*
E37C	Dome/Reading Lamps - 3rd Row	DNU	In the passenger compartment, overhead, in the headliner behind the second row seating, part of the third row video display	*Headliner Components*	*E37C Dome/Reading Lamps - 3rd Row*
E37EL	Dome/Reading Lamps - Front Overhead Console Left	—	In the passenger compartment, at the left front of the headliner, in the overhead console	*Overhead Console Components*	*E37EL Dome/Reading Lamps - Front Overhead Console Left*
E37ER	Dome/Reading Lamps - Front Overhead Console Right	—	In the passenger compartment, at the right front of the headliner, in the overhead console	*Overhead Console Components*	*E37ER Dome/Reading Lamps - Front Overhead Console Right*
E37H	Dome/Reading Lamps - Left Roof Rail	U42	In the passenger compartment, overhead, in the video display between the front and second row seating	*Headliner Components*	*E37H Dome/Reading Lamps - Left Roof Rail*
E37J	Dome/Reading Lamps - Right Roof Rail	U42	In the passenger compartment, overhead, in the video display between the front and second row seating	*Headliner Components*	*E37J Dome/Reading Lamps - Right Roof Rail*
E38	Flood Lamp - Center Console	—	In the passenger compartment, overhead, forward of center, on the overhead console	*Overhead Console Components*	*E38 Flood Lamp - Center Console*
E42L	Tail Lamp Assembly - Left	—	Outside of the vehicle, at the left rear corner of the vehicle	• *Rear of Vehicle Components (Z75)* • *Rear of Vehicle Components (Z88)* • *Rear of Vehicle Components (X88)*	—
E42R	Tail Lamp Assembly - Right	—	Outside of the vehicle, at the right rear corner of the vehicle	• *Rear of Vehicle Components (Z75)* • *Rear of Vehicle Components (X88)* • *Rear of Vehicle Components (Z88)*	—
E55LR	Flood Lamp - Left Rear Door Pocket	Z75	In the passenger compartment, rear of center, left side, in the left rear door trim, inside the arm rest	*Left Rear Door Components (Z75)*	*E55LR Flood Lamp - Left Rear Door Pocket*

E55RR	Flood Lamp - Right Rear Door Pocket	Z75	In the passenger compartment, rear of center, right side, in the right rear door trim, inside the arm rest	*Right Rear Door Components (Z75)*	*E55RR Flood Lamp - Right Rear Door Pocket*
E63D	Flood Lamp - Driver Door Handle	Z75	In the passenger compartment, forward of center, left side, in the driver door trim, inside the door handle pocket	*Driver Door Components (Z75)*	*E63D Flood Lamp - Driver Door Handle (Z75)*
E63P	Flood Lamp - Passenger Door Handle	Z75	In the passenger compartment, forward of center, right side, in the passenger door trim, inside the door handle pocket	*Passenger Door Components (Z75)*	*E63P Flood Lamp - Passenger Door Handle (Z75)*
E69L	Multifunction Lamp Assembly - Front Fascia Left	Z75	Outside of the vehicle, front left corner, mounted in the front fascia	—	—
E69R	Multifunction Lamp Assembly - Front Fascia Right	Z75	Outside of the vehicle, front right corner, mounted in the front fascia	—	—
F101	Passenger Instrument Panel Air Bag	—	In the passenger compartment, at the top of the passenger side of the instrument panel	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (Z75)*	• *F101 Passenger Instrument Panel Air Bag X1* • *F101 Passenger Instrument Panel Air Bag X2*
F105L	Roof Rail Air Bag - Left	—	In the passenger compartment, left side, overhead, along the left roof rail	—	—
F105R	Roof Rail Air Bag - Right	—	In the passenger compartment, right side, overhead, along the right roof rail	—	—
F106D	Seat Side Air Bag - Driver	—	In the passenger compartment, on the left side of the left front seat back	*Driver Seat Back Components*	• *F106D Seat Side Air Bag - Driver (KB6)* • *F106D Seat Side Air Bag - Driver (ULT+A45)*
F106DA	Seat Side Air Bag - Driver Inboard	AYQ	In the passenger compartment, on the right side of the left front seat back	*Driver Seat Back Components*	• *F106DA Seat Side Air Bag - Driver Inboard (KB6)* • *F106DA Seat Side Air Bag - Driver Inboard (ULT+A45)*
F106P	Seat Side Air Bag - Passenger	—	In the passenger compartment, on the right side of the right front seat back	*Passenger Seat Components View*	• *F106P Seat Side Air Bag - Passenger (KB6)* • *F106P Seat Side Air Bag - Passenger (ULT+A45)*
F107	Steering Wheel Air Bag	—	In the passenger compartment, in the center of the steering wheel	—	—
F112D	Seat Belt Retractor Pretensioner - Driver	—	In the passenger compartment, left side, at the base of the B-pillar	*Left Front of Passenger Compartment Views (Z75)*	• *F112D Seat Belt Retractor Pretensioner - Driver (AX7)* • *F112D Seat Belt Retractor Pretensioner - Driver (-AX7)*
F112P	Seat Belt Retractor Pretensioner - Passenger	—	In the passenger compartment, right side, at the base of the B-pillar	—	• *F112P Seat Belt Retractor Pretensioner - Passenger (AX7)* • *F112P Seat Belt Retractor Pretensioner - Passenger (-AX7)*

F113D	Seat Belt Anchor Pretensioner - Driver	—	In the passenger compartment, on the lower outside of the driver seat, mounted to the seat track	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	*F113D Seat Belt Anchor Pretensioner - Driver*
F113P	Seat Belt Anchor Pretensioner - Passenger	—	In the passenger compartment, on the lower outside of the passenger seat, mounted to the seat track	*Passenger Seat Cushion Components (without ULT)*	*F113P Seat Belt Anchor Pretensioner - Passenger*
G1	A/C Compressor	—	In the engine compartment, right side, mounted on the lower front of the engine	*Left Side of Engine Components (L83 or L86)*	—
G3	Air Suspension Compressor	Z85 or Z95	under the vehicle, at the left rear, behind left rear tire	—	*G3 Air Suspension Compressor*
G10L	Cooling Fan Motor - Left	—	At the front of the engine compartment, in the center of the left fan assembly	*Cooling Fans*	*G10L Cooling Fan Motor - Left*
G10R	Cooling Fan Motor - Right	—	At the front of the engine compartment, in the center of the right fan assembly	*Cooling Fans*	*G10R Cooling Fan Motor - Right*
G12B	Fuel Pump - Secondary	L96	Under the vehicle, in the secondary fuel tank, part of the fuel pump and level sensor assembly	—	—
G12	Fuel Pump	—	Under the vehicle, in the fuel tank, part of the fuel pump and level sensor assembly	—	—
G13	Generator	L83 or L86	In the engine compartment, right of center, at the top right front of the engine	• *Left Side of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*G13 Generator*
G13	Generator	L96	In the engine compartment, left of center, at the top left front of the engine	• *Left Side of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*G13 Generator*
G18	High Pressure Fuel Pump	L83 or L86	In the engine compartment, rearward of center, at the top back center of the engine, underneath the intake manifold	*Top of Engine Components (L83 or L86)*	*G18 High Pressure Fuel Pump (L83/L86)*
G19	Rear Window Washer Pump	—	In the engine compartment, left side, forward of the wheel well, behind the driver side head lamp assembly	*Left Front Corner of Vehicle Components*	*G19 Rear Window Washer Pump*
G24	Windshield Washer Pump	—	In the engine compartment, left side, forward of the wheel well, attached to the washer fluid reservoir, below the left headlamp assembly	• *Left Front Corner of Vehicle Components* • *Left Side of Engine Compartment Component View*	*G24 Windshield Washer Pump*
G31D	Seat Lumbar/Bolster Pump - Driver	ULT	In the passenger compartment, inside driver seat cushion	*Driver Seat Cushion Components (ULT)*	*G31D Seat Lumbar/Bolster Pump - Driver*
G31P	Seat Lumbar/Bolster Pump - Passenger	ULT	In the passenger compartment, inside passenger seat cushion	*Passenger Seat Cushion Components (ULT)*	*G31P Seat Lumbar/Bolster Pump - Passenger*
K4	Assist Step Control Module	BRS	Underneath the vehicle, along the outside of the left frame rail, near the the driver door	*Chassis Components View*	• *K4 Assist Step Control Module X1* • *K4 Assist Step Control Module X2*

K8A	Blower Motor Control Module - Auxiliary	—	In the rear compartment, right side, behind the rear quarter interior trim	—	—
K9	Body Control Module	—	In the passenger compartment, at the lower left side of the instrument panel	• *Back of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Left Front of Passenger Compartment Views (Z75)*	• *K9 Body Control Module X1* • *K9 Body Control Module X2* • *K9 Body Control Module X4* • *K9 Body Control Module X5* • *K9 Body Control Module X6* • *K9 Body Control Module X7*
K13	DVD Control Module	AYE	In the passenger compartment, in the floor console, left side under the instrument panel	—	—
K14	Distance Sensing Cruise Control Module	K59	Front of vehicle, left side bottom, behind the front fascia, on the frame rail, near ground G101	*Behind Front Fascia Components (X88/Z88)*	*K14 Distance Sensing Cruise Control Module*
K17	Electronic Brake Control Module	—	Underneath the vehicle, left side, along the inside of the frame rail, near the left side of the transmission	*Chassis Components View*	• *K17 Electronic Brake Control Module (L96)* • *K17 Electronic Brake Control Module (-L96)*
K19	Suspension Control Module	Z95	Underneath the vehicle, at the back, left of center, top side of the rear most chassis cross member, above spare tire	*Chassis Components View*	*K19 Suspension Control Module*
K20	Engine Control Module	—	In the engine compartment, to the left of the engine	*Left Side of Engine Compartment Component View*	• *K20 Engine Control Module X1 ((L83/L86)+MYC)* • *K20 Engine Control Module X1 (L86+M5U)* • *K20 Engine Control Module X1 (L96)* • *K20 Engine Control Module X2 ((L83/L86)+MYC)* • *K20 Engine Control Module X2 (L86+M5U)* • *K20 Engine Control Module X2 (L96)* • *K20 Engine Control Module X3 ((L83/L86)+MYC)* • *K20 Engine Control Module X3 (L86+M5U)* • *K20 Engine Control Module X3 (L96)*
K29R	Seat Heating Control Module - Rear	KA6	In the passenger compartment, rear of center, left side, under the second row seat cushion	• *2nd Row Bench Seat Cushions Bottom Components (ATT)* • *2nd Row Left Bucket Seat Components (ATN)*	• *K29R Seat Heating Control Module - Rear X1 (X88/Z88+KA6)* • *K29R Seat Heating Control Module - Rear X1 (Z75+KB6)* • *K29R Seat Heating Control Module - Rear X2 (X88/Z88+KA6)* • *K29R Seat Heating Control Module - Rear X2 (Z75+KB6)*

K29	Seat Heating Control Module	KA1	In the passenger compartment, forward of center, right side, under the passenger seat cushion	*Passenger Seat Cushion Components (without ULT)*	• *K29 Seat Heating Control Module X1 (X88/Z88+KQV)* • *K29 Seat Heating Control Module X1 (Z75+KB6)* • *K29 Seat Heating Control Module X2 (X88/Z88+KQV)* • *K29 Seat Heating Control Module X2 (Z75+KB6)*
K32	Steering Wheel Heating Control Module	UVD	In the passenger compartment, on lower center of the steering wheel assembly behind the steering wheel air bag	—	—
K33	HVAC Control Module	—	In the passenger compartment, in the passenger side of the Instrument Panel, behind the glove box, mounted to the top of the HVAC assembly	*Front of HVAC Assembly Components*	• *K33 HVAC Control Module X1* • *K33 HVAC Control Module X2* • *K33 HVAC Control Module X3* • *K33 HVAC Control Module X4*
K36	Inflatable Restraint Sensing and Diagnostic Module	—	In the passenger compartment, under the center console, on the floor	*Left Front of Passenger Compartment Views (Z75)*	• *K36 Inflatable Restraint Sensing and Diagnostic Module X1* • *K36 Inflatable Restraint Sensing and Diagnostic Module X2*
K38	Chassis Control Module	JL1 or Z85	Under the vehicle, at the rear, right side, mounted to the bracket above the spare tire	*Chassis Components View*	*K38 Chassis Control Module*
K39	Liftgate Control Module	TB5 or TC2	In the rear compartment, left side of the tailgate, behind the trim.	*Liftgate Components*	• *K39 Liftgate Control Module X1* • *K39 Liftgate Control Module X2* • *K39 Liftgate Control Module X3*
K40D	Seat Memory Control Module - Driver	A45 or ULT	In the passenger compartment, left side, under the driver seat cushion	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	• *K40D Seat Memory Control Module - Driver X1* • *K40D Seat Memory Control Module - Driver X2* • *K40D Seat Memory Control Module - Driver X3* • *K40D Seat Memory Control Module - Driver X4* • *K40D Seat Memory Control Module - Driver X5* • *K40D Seat Memory Control Module - Driver X6*
K40P	Seat Memory Control Module - Passenger	AG2 or ULT	In the passenger compartment, right side, under the passenger seat cushion	*Passenger Seat Cushion Components (ULT)*	• *K40P Seat Memory Control Module - Passenger X1* • *K40P Seat Memory Control Module - Passenger X2* • *K40P Seat Memory Control Module - Passenger X3*
K43	Power Steering Control Module	—	Underneath the vehicle, towards the front, on the power steering rack assembly	—	—

K53D	Seat Blower Assembly - Driver Back	X88/Z88	In the passenger compartment, forward of center, left side, inside the driver seat back	*Driver Seat Back Components*	• *K53D Seat Blower Assembly - Driver Back (X88/Z88)* • *K53D Seat Blower Assembly - Driver Back (Z75)*
K53D	Seat Blower Assembly - Driver Back	Z75	In the passenger compartment, forward of center, left side, inside the driver seat back	*Driver Seat Back Components*	• *K53D Seat Blower Assembly - Driver Back (X88/Z88)* • *K53D Seat Blower Assembly - Driver Back (Z75)*
K53P	Seat Blower Assembly - Passenger Back	X88/Z88	In the passenger compartment, forward of center, right side, inside the passenger seat back	*Passenger Seat Components View*	• *K53P Seat Blower Assembly - Passenger Back (X88/Z88)* • *K53P Seat Blower Assembly - Passenger Back (Z75)*
K53P	Seat Blower Assembly - Passenger Back	Z75	In the passenger compartment, forward of center, right side, inside the passenger seat back	*Passenger Seat Components View*	• *K53P Seat Blower Assembly - Passenger Back (X88/Z88)* • *K53P Seat Blower Assembly - Passenger Back (Z75)*
K55D	Seat Blower Assembly - Driver Cushion	X88/Z88	In the passenger compartment, forward of center, left side, inside the driver seat cushion	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	• *K55D Seat Blower Assembly - Driver Cushion (Z75)* • *K55D Seat Blower Assembly - Driver Cushion (X88/Z88)*
K55D	Seat Blower Assembly - Driver Cushion	Z75	In the passenger compartment, forward of center, left side, inside the driver seat cushion	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	• *K55D Seat Blower Assembly - Driver Cushion (Z75)* • *K55D Seat Blower Assembly - Driver Cushion (X88/Z88)*
K55P	Seat Blower Assembly - Passenger Cushion	X88/Z88	In the passenger compartment, forward of center, right side, inside the passenger seat cushion	• *Passenger Seat Cushion Components (without ULT)* • *Passenger Seat Cushion Components (ULT)*	• *K55P Seat Blower Assembly - Passenger Cushion (Z75)* • *K55P Seat Blower Assembly - Passenger Cushion (X88/Z88)*
K55P	Seat Blower Assembly - Passenger Cushion	Z75	In the passenger compartment, forward of center, right side, inside the passenger seat cushion	• *Passenger Seat Cushion Components (without ULT)* • *Passenger Seat Cushion Components (ULT)*	• *K55P Seat Blower Assembly - Passenger Cushion (Z75)* • *K55P Seat Blower Assembly - Passenger Cushion (X88/Z88)*
K56	Serial Data Gateway Module	—	In the passenger compartment, under the instrument panel, left of the steering column	—	• *K56 Serial Data Gateway Module X1* • *K56 Serial Data Gateway Module X2*
K60	Steering Column Lock Module	BTM	In the passenger compartment, on steering column, at shift lever	*Steering Column Components (2 of 2)*	*K60 Steering Column Lock Module*
K69	Transfer Case Control Module	NP0 or NQH	In the passenger compartment, under the instrument panel, right of the accelerator pedal	*Behind Left Side of Instrument Panel Components (1 of 2)*	• *K69 Transfer Case Control Module X1* • *K69 Transfer Case Control Module X2* • *K69 Transfer Case Control Module X3*

K71	Transmission Control Module	MYC or MYD	In the engine compartment, inside the transmission assembly, part of the control solenoid valve	*Left Side of Engine Compartment Component View*	*K71 Transmission Control Module*
K71	Transmission Control Module	M5U	In the engine compartment, left side of bulkhead, near the brake master cylinder	*Left Side of Engine Compartment Component View*	*K71 Transmission Control Module*
K73	Telematics Communication Interface Control Module	UE1	In the passenger compartment, inside instrument panel, right side, above glove box	*Back of Instrument Panel Components (Z75)*	• *K73 Telematics Communication Interface Control Module X1* • *K73 Telematics Communication Interface Control Module X2*
K74	Human Machine Interface Control Module	IO5 or IO6	In the passenger compartment, right side of the instrument panel, below the passenger air bag	• *Back of Instrument Panel Components (Z75)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 without D07/DCK)*	• *K74 Human Machine Interface Control Module X1* • *K74 Human Machine Interface Control Module X2*
K77	Remote Control Door Lock Receiver	—	In the passenger compartment, right rear, on C-pillar	—	*K77 Remote Control Door Lock Receiver*
K83	Park Brake Control Module	J71	Underneath the vehicle, at the rear, near center of the rear bumper bar	*Chassis Components View*	*K83 Park Brake Control Module*
K84	Keyless Entry Control Module	ATH or BTM	In the rear compartment, left side, underneath rear quarter window behind trim	• *Right Rear Cargo Area Components* • *Left Rear Cargo Area Components*	• *K84 Keyless Entry Control Module X1* • *K84 Keyless Entry Control Module X2*
K85	Passenger Presence Module	—	In the passenger compartment, under the front of the front passenger seat cushion	• *Passenger Seat Cushion Components (ULT)* • *Passenger Seat Cushion Components (without ULT)*	*K85 Passenger Presence Module*
K89	Immobilizer Control Module	without BTM	In the passenger compartment, on the driver side, near the ignition cylinder	*Center Console Bottom Component Views*	*K89 Immobilizer Control Module*
K89	Immobilizer Control Module	BTM	In the passenger compartment, near center, between the driver and passenger seat, inside floor console	*Center Console Bottom Component Views*	*K89 Immobilizer Control Module*
K99	Steering Column Position Control Module	N38	In the passenger compartment, forward, left side, mounted to the bottom of the steering column	*Steering Column Components (1 of 2)*	• *K99 Steering Column Position Control Module X1* • *K99 Steering Column Position Control Module X2* • *K99 Steering Column Position Control Module X3* • *K99 Steering Column Position Control Module X4*
K111	Fuel Pump Driver Control Module	—	Underneath the vehicle, rear, mounted to the bracket above the spare tire	*Chassis Components View*	*K111 Fuel Pump Driver Control Module*

K124	Active Safety Control Module	UGN with Z75	In the rear compartment, left side, underneath rear quarter glass window, behind trim	Left Rear Cargo Area Components	• K124 Active Safety Control Module X1 • K124 Active Safety Control Module X2
K127	Communication Interface Module - WLAN Router	Accessory Router	Inside the vehicle, under the instrument panel, near the driver side hush panel	—	—
K133	Trailer Brake Power Control Module	JL1	Under the vehicle, mounted to the bracket above the spare tire, next to K111	Chassis Components View	K133 Trailer Brake Power Control Module
K134D	Seat Bolster Memory Control Module - Driver	ULT	In the passenger compartment, inside driver seat cushion	Driver Seat Cushion Components (ULT)	K134D Seat Bolster Memory Control Module - Driver
K134P	Seat Bolster Memory Control Module - Passenger	ULT	In the passenger compartment, inside passenger seat cushion	Passenger Seat Cushion Components (ULT)	K134P Seat Bolster Memory Control Module - Passenger
K157	Video Processing Control Module	UVH	In the passenger compartment, front, left side, left of steering column, behind instrument panel, near the BCM	Left Front of Passenger Compartment Views (Z75)	• K157 Video Processing Control Module X1 • K157 Video Processing Control Module X2
K166L	Multifunction LED Control Module - Left Headlamp	—	Outside the vehicle, left front corner, attached to the headlamp assembly	Headlamp Components (Z75)	—
K166R	Multifunction LED Control Module - Right Headlamp	—	Outside the vehicle, right front corner, attached to the headlamp assembly	Headlamp Components (Z75)	—
K167L	Multifunction LED Control Module - Front Fascia Left	Z75	Outside the vehicle, left front corner, inside front fascia, attached to the Multifunction Lamp Assembly	—	—
K167R	Multifunction LED Control Module - Front Fascia Right	Z75	Outside the vehicle, right front corner, inside front fascia, attached to the Multifunction Lamp Assembly	—	—
K169	Folding Seat Control Module - 3rd Row	AS8	In the passenger compartment, in the 3rd row seat, left side, inside seat back in the lower left corner	3rd Row Seat Back Components (AS8)	• K169 Folding Seat Control Module - 3rd Row X1 (AS8) • K169 Folding Seat Control Module - 3rd Row X2 (AS8)
K171	Hands-Free Liftgate Sensor Control Module	TC2	At the rear of the vehicle, center, mounted to the underside of the rear bumper	Behind Rear Fascia Components	K171 Hands - Free Liftgate Sensor Control Module X1 (TC2)
K174L	Multifunction LED Control Module - Left Tail Lamp	Z75 or Z88	At the left rear corner of the vehicle, internal to the left tail lamp assembly, attached the tail lamp assembly	• Tail Lamp Components (Z75) • Tail Lamp Components (Z75)	—
K174R	Multifunction LED Control Module - Right Tail Lamp	Z75 or Z88	At the left rear corner of the vehicle, internal to the right tail lamp assembly, attached the tail lamp assembly	—	—
K175	Center Console Compartment Cooler Control Module	DCK	In the passenger compartment, center, inside center console at the floor	—	K175 Center Console Compartment Cooler Control Module

K182	Parking Assist Control Module	UD5 or UD7	In the rear compartment, behind the rear seat, left side near the wheel well, behind the rear compartment trim	*Left Rear Cargo Area Components*	• *K182 Parking Assist Control Module X1 (UD5/UD7/UKG)* • *K182 Parking Assist Control Module X2 (UD5/UD7/UKG)* • *K182 Parking Assist Control Module X3 (UD5/UD7/UKG)*
K188	Human Machine Interface Control Module Bypass Module	IO5 or IO6	In the passenger compartment, in the instrument panel	—	*K188 Human Interface Control Module Bypass Module X1*
KR4B	Outside Rearview Mirror Heater Relay	DL3 or DR4	In the rear body fuse block	—	—
KR5	Rear Defogger Relay	C49	In the rear body fuse block	—	—
KR23A	Fuel Pump Relay	—	In the underhood fuse block	—	—
KR23B	Fuel Pump Relay - Secondary	L96	In the underhood fuse block	—	—
KR27	Starter Relay	—	In the underhood fuse block	—	—
KR53	Park Lamps Relay	—	In the underhood fuse block	—	—
KR57	Rear Fog Lamp Relay	T79	In the rear body fuse block	—	—
KR58	Roof Beacon Relay	TRW	In the passenger compartment, overhead, in the overhead console	—	—
KR73	Ignition Main Relay	—	In the underhood fuse block	—	—
KR75	Engine Controls Ignition Relay	—	In the underhood fuse block	—	—
KR79	Auxiliary Battery Relay 2	5W4 or 9C1	In the engine compartment, left side, near C1B Auxiliary Battery	—	—
KR81	Auxiliary Battery Relay 1	5W4 or 9C1	In the engine compartment, left side, near C1B Auxiliary Battery	—	—
KR95A	Liftgate Unlatch Relay	TB4	In the rear body fuse block	—	—
KR98	Vehicle Level Control Compressor Relay	Z85 or Z95	In the engine compartment, left side, under brake master cylinder	—	*KR98 Vehicle Level Control Compressor Relay*
KR103	DVD Relay	AYE	In the passenger compartment, in the floor console, left side under the instrument panel	—	—
KR161A	Configurable Provision Relay 1	5W4 or 9C1	In the underhood fuse block	—	—
KR161B	Configurable Provision Relay 2	5W4 or 9C2	In the underhood fuse block	—	—
KR161C	Configurable Provision Relay 3	5W4 or 9C3	In the underhood fuse block	—	—
KR161D	Configurable Provision Relay 4	5W4 or 9C4	In the underhood fuse block	—	—
KR162	Liftgate Window Unlatch Relay	—	In the rear body fuse block	—	—
M4	Air Inlet Door Actuator	—	In the passenger compartment, behind the instrument panel glove box	*Front of HVAC Assembly Components*	*M4 Air Inlet Door Actuator*
M5	Adjustable Pedal Motor	JF4	In the passenger compartment, left side, in the driver footwell, attached to the accelerator pedal assembly	*Behind Left Side of Instrument Panel Components (1 of 2)*	*M5 Adjustable Pedal Motor*

M6B	Air Temperature Door Actuator - Auxiliary	—	In the rear compartment, under the right rear quarter window, forward of the rear blower under trim.	—	—
M6L	Air Temperature Door Actuator - Left	—	In the passenger compartment, behind the instrument panel, on the HVAC case center	*Front of HVAC Assembly Components*	*M6L Air Temperature Door Actuator - Left*
M6R	Air Temperature Door Actuator - Right	—	In the passenger compartment, behind the instrument panel, on the HVAC case	*Back of HVAC Assembly Components*	*M6R Air Temperature Door Actuator - Right*
M7	Transmission Shift Lock Control Solenoid Actuator	—	In the passenger compartment, right side of the steering wheel, attached to transmission shift lever	*Steering Column Components (2 of 2)*	*M7 Transmission Shift Lock Control Solenoid Actuator*
M8B	Blower Motor - Auxiliary	—	In the rear compartment, right side, behind the interior rear quarter trim	—	—
M8	Blower Motor	—	In the passenger compartment, behind the passenger side of the instrument panel	*Back of HVAC Assembly Components*	*M8 Blower Motor*
M26	Front Axle Engagement Actuator	NP0 or NQH	Underside of the vehicle, at the front, center, on front axle	*Front Axle Components*	*M26 Front Axle Engagement Actuator*
M27	Fuel Fill Door Unlatch Actuator	N08	Underside of the vehicle, near the back, left side, under rear quarter glass window, in rear quarter panel	—	*M27 Fuel Fill Door Unlatch Actuator*
M31	Liftgate Motor	TB5 or TC2	In the rear compartment, left side of liftgate, on liftgate strut	*Liftgate Components*	*M31 Liftgate Motor*
M33	Liftgate Window Latch Assembly	—	In the rear compartment, inside the tailgate, at center	*Liftgate Components*	*M33 Liftgate Window Latch Assembly*
M37B	Mode Door Actuator - Auxiliary	—	In the passenger compartment, forward, internal to the instrument panel	—	—
M37L	Mode Door Actuator - Left	—	In the passenger compartment, behind the left side of the instrument panel, on the upper left side of the HVAC module	*Front of HVAC Assembly Components*	*M37L Mode Door Actuator - Left*
M38	Power Steering Motor	—	Under the vehicle, part of the steering gear assembly	—	—
M45	Rear Wiper Motor	—	At rear of vehicle, in the liftgate	*Liftgate Components*	*M45 Rear Wiper Motor*
M50D	Seat Front Vertical Motor - Driver	—	In the passenger compartment, under the front of the driver seat, next to the right seat track	*Driver Seat Cushion Components (without ULT)*	*M50D Seat Front Vertical Motor - Driver*
M50P	Seat Front Vertical Motor - Passenger	—	In the passenger compartment, under the front of the passenger seat, next to the right seat track	*Passenger Seat Cushion Components (without ULT)*	*M50P Seat Front Vertical Motor - Passenger*
M51D	Seat Horizontal Motor - Driver	—	In the passenger compartment, under the center of the driver seat, between the seat tracks	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	*M51D Seat Horizontal Motor - Driver*
M51P	Seat Horizontal Motor - Passenger	—	In the passenger compartment, under the center of the passenger seat, between the seat tracks	• *Passenger Seat Cushion Components (ULT)* • *Passenger Seat Cushion Components (without ULT)*	*M51P Seat Horizontal Motor - Passenger*
M52D	Seat Lumbar Support Horizontal Motor - Driver	without Y91 or Z75	In the passenger compartment, part of the driver seat back	*Driver Seat Back Components*	*M52D Seat Lumbar Support Horizontal Motor - Driver*

M52P	Seat Lumbar Support Horizontal Motor - Passenger	without Y91 or Z75	In the passenger compartment, part of the passenger seat back	*Passenger Seat Components View*	*M52P Seat Lumbar Support Horizontal Motor - Passenger*
M55D	Seat Rear Vertical Motor - Driver	—	In the passenger compartment, under the front of the driver seat, next to the left seat track	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	*M55D Seat Rear Vertical Motor - Driver*
M55P	Seat Rear Vertical Motor - Passenger	—	In the passenger compartment, under the front of the passenger seat, next to the left seat track	• *Passenger Seat Cushion Components (without ULT)* • *Passenger Seat Cushion Components (ULT)* • *Passenger Seat Cushion Components (ULT)*	*M55P Seat Rear Vertical Motor - Passenger*
M56D	Seat Recline Motor - Driver	—	In the passenger compartment, part of the driver seat back	*Driver Seat Back Components*	*M56D Seat Recline Motor - Driver*
M56P	Seat Recline Motor - Passenger	—	In the passenger compartment, part of the passenger seat back	*Passenger Seat Components View*	*M56P Seat Recline Motor - Passenger*
M60A	Active Grille Air Shutter 1 Motor Module	—	On the front of the vehicle behind the grille in the center of the air shutter assembly	—	*M60A Active Grille Air Shutter 1 Motor Module*
M64	Starter Motor	—	In the engine compartment, lower right rear of the engine	• *Right Rear Side of Engine Components (L96)* • *Right Rear Side of Engine Components (L83 or L86)*	• *M64 Starter Motor ((L83/L86)+MYC)* • *M64 Starter Motor (L86+M5U)* • *M64 Starter Motor (L96)*
M65	Steering Column Telescope Motor	N38	In the passenger compartment, forward, left of center, on the steering column	—	—
M68	Steering Column Tilt Motor	N38	In the passenger compartment, forward, left of center, on the steering column	—	—
M69	Sunroof Motor	CF5	In the passenger compartment, overhead, in the center of the headliner	—	—
M74D	Window Motor - Driver	—	In the passenger compartment, behind the driver door trim panel, at the center of the door	• *Driver Door Components (Z75)* • *Driver Door Components (X88 or Z88)*	*M74D Window Motor - Driver*
M74LR	Window Motor - Left Rear	—	In the passenger compartment, center of the left rear door, behind the door trim panel	• *Left Rear Door Components (X88 or Z88)* • *Left Rear Door Components (Z75)*	*M74LR Window Motor - Left Rear*
M74P	Window Motor - Passenger	—	In the passenger compartment, behind the front passenger door trim panel, at the center of the door	• *Passenger Door Components (X88 or Z88)* • *Passenger Door Components (Z75)*	*M74P Window Motor - Passenger*
M74RR	Window Motor - Right Rear	—	In the passenger compartment, center of the right rear door, behind the door trim panel	• *Right Rear Door Components (X88 or Z88)* • *Right Rear Door Components (Z75)*	*M74RR Window Motor - Right Rear*
M75	Windshield Wiper Motor	—	At the left rear of the engine compartment, near the windshield	*Left Side of Engine Compartment Component View*	*M75 Windshield Wiper Motor*

M77D	Outside Rearview Mirror Motor - Driver	—	Outside of the vehicle, left side, forward on the driver door, inside the outside rear view mirror	—	—
M77P	Outside Rearview Mirror Motor - Passenger	—	Outside of the vehicle, right side, forward on the passenger door, inside the outside rear view mirror	—	—
M78D	Outside Rearview Mirror Folding Motor - Driver	DL3 or DR4	Outside of the vehicle, left side, forward on the driver door, inside the outside rear view mirror	—	—
M78P	Outside Rearview Mirror Folding Motor - Passenger	DL3 or DR4	Outside of the vehicle, right side, forward on the passenger door, inside the outside rear view mirror	—	—
M91	Instrument Panel Compartment Door Unlatch Actuator	Z75	In the passenger compartment, forward, right side, inside the instrument panel on the glove box	—	*M91 Instrument Panel Compartment Door Unlatch Actuator*
M95L	Assist Step - Left	BRS	Under the vehicle, along the left frame rail, under the driver door	*Chassis Components View*	*M95L Assist Step - Left*
M95R	Assist Step - Right	BRS	Under the vehicle, along the right frame rail, under the passenger door	*Chassis Components View*	*M95R Assist Step - Right*
M101L	Seat Belt Retractor Motor Module - Left	AX7	In the passenger compartment, left side, at the base of the B-Pillar, part of the seat belt retractor	*Left Front of Passenger Compartment Views (Z75)*	*M101L Seat Belt Retractor Motor Module - Left*
M101R	Seat Belt Retractor Motor Module - Right	AX7	In the passenger compartment, right side, at the base of the B-Pillar, part of the seat belt retractor	—	*M101R Seat Belt Retractor Motor Module - Right*
M107LR	Folding Seat Motor - 2nd Row Left	ATN or ATT	In the passenger compartment, left side, under 2nd row seat cushion	• *2nd Row Left Bucket Seat Components (ATN)* • *2nd Row Bench Seat Cushions Bottom Components (ATT)*	*M107LR Folding Seat Motor - 2nd Row Left*
M107RR	Folding Seat Motor - 2nd Row Right	ATN or ATT	In the passenger compartment, right side, under 2nd row seat cushion	• *2nd Row Right Bucket Seat Components (ATN)* • *2nd Row Bench Seat Cushions Bottom Components (ATT)*	*M107RR Folding Seat Motor - 2nd Row Right*
M108LR	Folding Seat Motor - 3rd Row Left	AS8	In the passenger compartment, left side, at the bottom of the 3rd row seat back	*3rd Row Seat Back Components (AS8)*	—
M108RR	Folding Seat Motor - 3rd Row Right	AS8	In the passenger compartment, right side, at the bottom of the 3rd row seat back	*3rd Row Seat Back Components (AS8)*	—
M109LR	Folding Seat Back Unlatch Motor - 3rd Row Left	AS8	In the passenger compartment, left side, at the middle of the 3rd row seat back	*3rd Row Seat Back Components (AS8)*	—
M109RR	Folding Seat Back Unlatch Motor - 3rd Row Right	AS8	In the passenger compartment, right side, at the middle of the 3rd row seat back	*3rd Row Seat Back Components (AS8)*	—
P7	Display	—	In the passenger compartment, forward, center, part of the P17 info display module	—	—
P9	Driver Information Center Display	—	In the passenger compartment, forward, left of center, part of the instrument cluster in the instrument panel	—	—
P12	Horn	—	In the engine compartment, lower left corner of the radiator support	• *Cooling Fans* • *Left Side of Engine Compartment Component View*	*P12 Horn*

P14	Passenger Air Bag Disabled Indicator	—	In the passenger compartment, forward, overhead, in the center of the overhead console	*Overhead Console Components*	• *P14 Passenger Air Bag Disabled Indicator (DRZ)* • *P14 Passenger Air Bag Disabled Indicator (-DRZ)*
P16	Instrument Cluster	—	In the passenger compartment, at the top of the driver side of the instrument panel, above the steering column	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (Z75)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	*P16 Instrument Cluster*
P17	Info Display Module	—	In the passenger compartment, at the top center of the instrument panel, above the radio controls	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (Z75)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	• *P17 Info Display Module X1 (X88/Z88)* • *P17 Info Display Module X1 (Z75)* • *P17 Info Display Module X2 (X88/Z88)*
P19AC	Speaker - Subwoofer	UQA, UQH or UQS	In the passenger compartment, forward of center, under the floor console, near the instrument panel	*Front Center of The Passenger Compartment Components*	*P19AC Speaker - Subwoofer*
P19AG	Speaker - Left Front Door	—	In the passenger compartment, at the front of the left front door, behind the door trim panel	• *Driver Door Components (Z75)* • *Driver Door Components (X88 or Z88)*	*P19AG Speaker - Left Front Door*
P19AH	Speaker - Right Front Door	—	In the passenger compartment, at the front of the right front door, behind the door trim panel	• *Passenger Door Components (Z75)* • *Passenger Door Components (X88 or Z88)*	*P19AH Speaker - Right Front Door*
P19AL	Speaker - Left Rear Door	—	In the passenger compartment, in the lower left rear door, behind the door panel	• *Left Rear Door Components (X88 or Z88)* • *Left Rear Door Components (Z75)*	*P19AL Speaker - Left Rear Door*
P19AM	Speaker - Right Rear Door	—	In the passenger compartment, in the lower right rear door, behind the door panel	• *Right Rear Door Components (X88 or Z88)* • *Right Rear Door Components (Z75)*	*P19AM Speaker - Right Rear Door*
P19AN	Speaker - Left Rear Trim Panel	UQA, UQH or UQS	In the rear compartment, at the back, left side at the top of the D-Pillar	*Left Rear Cargo Area Components*	*P19AN Speaker - Left Rear Trim Panel*
P19AP	Speaker - Right Rear Trim Panel	UQA, UQH or UQS	In the rear compartment, at the back, right side at the top of the D-Pillar	*Right Rear Cargo Area Components*	*P19AP Speaker - Right Rear Trim Panel*
P19B	Speaker - Center Instrument Panel	UQH or UQS	In the passenger compartment, center of the instrument panel	• *Back of Instrument Panel Components (Z75)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)*	*P19B Speaker - Center Instrument Panel*
P19DD	Speaker - Left Front Door Woofer	UQH	In the passenger compartment, at the front of the left front door, behind the door trim panel	*Driver Door Components (Z75)*	*P19DD Speaker - Left Front Door Woofer (UQH)*

P19HD	Speaker - Left Front Door Tweeter	UQH	In the passenger compartment, at the front of the left front door, behind the door trim panel, at the door mirror	Driver Door Components (Z75)	P19HD Speaker - Left Front Door Tweeter (UQH)
P19J	Speaker - Left Instrument Panel	—	In the passenger compartment, in the upper left of the instrument panel	• Front of Instrument Panel Components (X88/Z88 without D07/DCK) • Back of Instrument Panel Components (Z75)	• P19J Speaker - Left Instrument Panel (UQ3) • P19J Speaker - Left Instrument Panel (UQA/UQH/UQS)
P19M	Speaker - Left Rear Tweeter	UQH	In the passenger compartment, in the upper left rear door, behind the door panel, near door handle	Left Rear Door Components (Z75)	P19M Speaker - Left Rear Tweeter
P19PD	Speaker - Right Front Door Woofer	UQH	In the passenger compartment, at the front of the right front door, behind the door trim panel	Passenger Door Components (Z75)	P19PD Speaker - Right Front Door Woofer
P19VD	Speaker - Right Front Door Tweeter	UQH	In the passenger compartment, at the front of the right front door, behind the door trim panel, at the door mirror	Passenger Door Components (Z75)	P19VD Speaker - Right Front Door Tweeter (UQH)
P19W	Speaker - Right Instrument Panel	—	In the passenger compartment, in the upper right of the instrument panel	• Back of Instrument Panel Components (Z75) • Front of Instrument Panel Components (X88/Z88 without D07/DCK)	• P19W Speaker - Right Instrument Panel (UQ3) • P19W Speaker - Right Instrument Panel (UQA/UQH/UQS)
P19Z	Speaker - Right Rear Tweeter	UQH	In the passenger compartment, in the upper right rear door, behind the door panel, near door handle	Right Rear Door Components (Z75)	P19Z Speaker - Right Rear Tweeter
P22A	Video Display - 2nd Row	U42	In the passenger compartment, in the headliner between the front and second row seating	Headliner Components	• P22A Video Display - 2nd Row X2 (ULT) • P22A Video Display - 2nd Row X2 (-ULT)
P22B	Video Display - 3rd Row	DNU	In the passenger compartment, in the headliner between the second and third row seating	Headliner Components	P22B Video Display - 3rd Row
P25	Power Sounder Content Theft Deterrent Alarm Module	UTT	In the engine compartment, rear, under the air inlet grille, near center	—	P25 Power Sounder Content Theft Deterrent Alarm Module
P29	Head-Up Display	UV6	In the passenger compartment, forward left, in the instrument panel on the top, forward of the gauge cluster	• Front of Instrument Panel Components (X88/Z88 with D07/DCK) • Front of Instrument Panel Components (X88/Z88 without D07/DCK) • Back of Instrument Panel Components (Z75)	P29 Heads - Up Display X1
P34D	Side Object Detection Indicator - Driver	UKC	At the front of the Left front door, part of the Outside Rearview Mirror, part of the mirror glass	—	—
P34P	Side Object Detection Indicator - Passenger	UKC	At the front of the Right front door, part of the Outside Rearview Mirror, part of the mirror glass	—	—
P43	Collision Alert Indicators	UEU, UFL or UHX without UV6	In the passenger compartment, behind the upper left of the instrument panel, above the instrument cluster	• Back of Instrument Panel Components (X88/Z88 without D07/DCK) • Back of Instrument Panel Components (X88/Z88 with D07/DCK)	P43 Collision Alert Indicators

P45LR	Seat Haptic Movement Motor - Driver Left Rear	UEU, UFL UHX, or UGN	In the passenger compartment, part of the driver seat cushion	● *Driver Seat Cushion Components (without ULT)* ● *Driver Seat Cushion Components (ULT)*	*P45LR Seat Haptic Movement Motor - Driver Left Rear*
P45RR	Seat Haptic Movement Motor - Driver Right Rear	UEU, UFL UHX, or UGN	In the passenger compartment, part of the driver seat cushion	● *Driver Seat Cushion Components (without ULT)* ● *Driver Seat Cushion Components (ULT)*	*P45RR Seat Haptic Movement Motor - Driver Right Rear*
P50	Emergency Call Backup Speaker	UI3	In the engine compartment, in the Instrument Panel, near center	—	*P27 Mobile Telephone Speaker*
Q2	A/C Compressor Clutch	—	In the engine compartment, right of center, on the right front of the engine, at the bottom.	● *Right Rear Side of Engine Components (L96)* ● *Right Rear Side of Engine Components (L83 or L86)*	*Q2 A/C Compressor Clutch*
Q4	Vehicle Level Control Solenoid Valve	Z85 or Z95	Underside of vehicle, at the rear, part of the air suspension compressor	—	—
Q5	Brake Pressure Modulator	—	In the engine compartment, left rear, part of the Brake Control Module	—	—
Q6	Camshaft Position Actuator Solenoid Valve	—	In the engine compartment, at the front right side of the engine	*Front of Engine Components (L83 or L86)*	*Q6 Camshaft Position Actuator Solenoid Valve*
Q8	Control Solenoid Valve Assembly	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Internal Components (MYC or MYD)*	*Q8 Control Solenoid Valve Assembly*
Q12	Evaporative Emission Purge Solenoid Valve	L83 or L86	In the engine compartment, forward of center, top and front of the engine just left of the throttle body	● *Left Rear Side of Engine Components (L96)* ● *Left Side of Engine Components (L83 or L86)*	● *Q12 Evaporative Emission Purge Solenoid Valve ((L83/L86)+MYC)* ● *Q12 Evaporative Emission Purge Solenoid Valve (L86+M5U)* ● *Q12 Evaporative Emission Purge Solenoid Valve (L96)*
Q12	Evaporative Emission Purge Solenoid Valve	L96	In the engine compartment, forward of center, top of the engine, on the left, just behind the generator	● *Left Rear Side of Engine Components (L96)* ● *Left Side of Engine Components (L83 or L86)*	● *Q12 Evaporative Emission Purge Solenoid Valve ((L83/L86)+MYC)* ● *Q12 Evaporative Emission Purge Solenoid Valve (L86+M5U)* ● *Q12 Evaporative Emission Purge Solenoid Valve (L96)*
Q13	Evaporative Emission Vent Solenoid Valve	—	Underneath the vehicle, just left of center, at the rear of the vehicle, attached to the front facing side of the rear most chassis cross member, above the spare tire	*Chassis Components View*	*Q13 Evaporative Emission Vent Solenoid Valve*
Q17A	Fuel Injector 1	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 1	● *Top of Engine Components (L83 or L86)* ● *Left Rear Side of Engine Components (L96)*	*Q17A Fuel Injector 1*

Q17B	Fuel Injector 2	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 2	• *Top of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	*Q17B Fuel Injector 2*
Q17C	Fuel Injector 3	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 3	• *Top of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*Q17C Fuel Injector 3*
Q17D	Fuel Injector 4	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 4	• *Right Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	*Q17D Fuel Injector 4*
Q17E	Fuel Injector 5	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 5	• *Top of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*Q17E Fuel Injector 5*
Q17F	Fuel Injector 6	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 6	• *Right Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	*Q17F Fuel Injector 6*
Q17G	Fuel Injector 7	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 7	• *Top of Engine Components (L83 or L86)* • *Left Rear Side of Engine Components (L96)*	*Q17G Fuel Injector 7*
Q17H	Fuel Injector 8	—	In the engine compartment, top of the engine, attached to the fuel rail, above cylinder 8	• *Right Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	*Q17H Fuel Injector 8*
Q27A	Pressure Control Solenoid Valve 1	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q27B	Pressure Control Solenoid Valve 2	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q27C	Pressure Control Solenoid Valve 3	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q27D	Pressure Control Solenoid Valve 4	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q27E	Pressure Control Solenoid Valve 5	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q32A	Shift Solenoid Valve 1	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—

Q32B	Shift Solenoid Valve 2	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q37LF	Shock Absorber Actuator - Left Front	Z95	Outside the vehicle, at the left front corner, near the top of the strut	—	*Q37LF Shock Absorber Actuator - Left Front*
Q37LR	Shock Absorber Actuator - Left Rear	Z95	Outside the vehicle, at the left front corner, near the top of the shock	*Chassis Components View*	*Q37LR Shock Absorber Actuator - Left Rear*
Q37RF	Shock Absorber Actuator - Right Front	Z95	Outside the vehicle, at the left front corner, near the top of the strut	—	*Q37RF Shock Absorber Actuator - Right Front*
Q37RR	Shock Absorber Actuator - Right Rear	Z95	Outside the vehicle, at the left front corner, near the top of the shock	*Chassis Components View*	*Q37RR Shock Absorber Actuator - Right Rear*
Q38	Throttle Body	—	In the engine compartment, center, at the top front of the engine	• *Left Side of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	• *Q38 Throttle Body ((L83/L86)+MYC)* • *Q38 Throttle Body (L86+M5U)* • *Q38 Throttle Body (L96)*
Q39A	Torque Converter Clutch Pressure Control Solenoid Valve	MYC or MYD	Underside of the vehicle, forward of middle, internal to the transmission, part of the control solenoid	—	—
Q43	Valve Lifter Oil Manifold Assembly	L83 or L86	In the engine compartment, mounted in the valve lifter valley below the intake manifold	*Left Side of Engine Components (L83 or L86)*	*Q43 Valve Lifter Oil Manifold Assembly*
Q44	Engine Oil Pressure Control Solenoid Valve	L83 or L86	In the engine compartment, at the front of the engine, right of the cam actuator	*Front of Engine Components (L83 or L86)*	*Q44 Engine Oil Pressure Control Solenoid Valve*
Q46	A/C Compressor Solenoid Valve	—	In the front of the engine compartment, part of the compressor assembly	• *Right Rear Side of Engine Components (L96)* • *Right Rear Side of Engine Components (L83 or L86)*	*Q46 A/C Compressor Solenoid Valve*
Q77A	Transmission Control Solenoid Valve 1	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77B	Transmission Control Solenoid Valve 2	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77C	Transmission Control Solenoid Valve 3	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77D	Transmission Control Solenoid Valve 4	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77E	Transmission Control Solenoid Valve 5	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77F	Transmission Control Solenoid Valve 6	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77G	Transmission Control Solenoid Valve 7	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77H	Transmission Control Solenoid Valve 8	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—
Q77J	Transmission Control Solenoid Valve 9	M5U	Underside of the vehicle, forward of middle, internal to the transmission	*Automatic Transmission Valve Body Components (M5U)*	—

R6A	Terminating Resistor - High Speed Bus	without J71, JL1, Z85 or Z95	Underneath the vehicle, at the rear, along the inside of the right frame rail, forward facing side of the rear most cross member, taped in the harness near the chassis control module	*Chassis Components View*	*R6A Terminating Resistor - High Speed Bus*
R6E	Terminating Resistor - High Speed Extension Bus 1	UGN	In the rear compartment, at the back, about 21CM from the Breakout to the Left Glass Breakage Sensor	—	● *R6E Terminating Resistor - High Speed Extension Bus 1 (UHX/UDV)* ● *R6E Terminating Resistor - High Speed Extension Bus 1 (Z75+UGN)*
R6E	Terminating Resistor - High Speed Extension Bus 1	UHX	In the passenger compartment, In the Instrument Panel, Taped to the breakout to the X305 connector	—	● *R6E Terminating Resistor - High Speed Extension Bus 1 (UHX/UDV)* ● *R6E Terminating Resistor - High Speed Extension Bus 1 (Z75+UGN)*
R6F	Terminating Resistor - High Speed Extension Bus 2	—	In the passenger compartment, In the Instrument Panel, Taped near the breakout to the Right front floor accent lamp	—	*R6F Terminating Resistor - High Speed Extension Bus 2*
S2A	Transmission Manual Shift Switch - Up/Down	KB7	In the passenger compartment, part of the transmission shift lever	*Steering Column Components (1 of 2)*	—
S3	Transmission Shift Lever	—	In the passenger compartment, forward, left of center, on the right side of the steering column	*Steering Column Components (1 of 2)*	*S3 Transmission Shift Lever*
S5	Center Console Compartment Lamp Switch	D07	In the passenger compartment, under the center console compartment lid	● *Center Console Rear Component Views (X88/Z88)* ● *Center Console Top Component Views (Z75)*	*S5 Center Console Compartment Lamp Switch*
S12	Dome Lamp Switch	—	In the passenger compartment, overhead, forward of center, in the overhead console	*Overhead Console Components*	*S12 Dome Lamp Switch*
S13D	Door Lock Switch - Driver	—	In the passenger compartment, in the driver door handle trim panel	● *Driver Door Components (X88 or Z88)* ● *Driver Door Components (Z75)*	*S13D Door Lock Switch - Driver*
S13P	Door Lock Switch - Passenger	—	In the passenger compartment, in the passenger door handle trim panel	● *Passenger Door Components (Z75)* ● *Passenger Door Components (X88 or Z88)*	*S13P Door Lock Switch - Passenger*
S25	Garage Door Opener	UG1	In the passenger compartment, overhead, forward of center, in the overhead console	*Overhead Console Components*	*S25 Garage Door Opener*
S27	Head-Up Display Switch	UV6	In the passenger compartment, left side, on the instrument panel, left of the instrument cluster	● *Front of Instrument Panel Components (Z75)* ● *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* ● *Front of Instrument Panel Components (Z75)*	*S27 Head-Up Display Switch*

S30	Headlamp Switch	—	In the passenger compartment, forward, left side, on the instrument panel left of the steering column	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Front of Instrument Panel Components (Z75)*	*S30 Headlamp Switch*
S31D	Seat Heating and Cooling Switch - Driver	KA1 or KB6, without Z75	In the passenger compartment, forward, on the instrument panel, on driver side of the HVAC controls, in floor console bezel	*Center Console Top Component Views (X88/Z88)*	*S31D Seat Heating and Cooling Switch - Driver*
S31P	Seat Heating and Cooling Switch - Passenger	KA1 or KB6, without Z75	In the passenger compartment, forward, on the instrument panel, on passenger side of the HVAC controls, in floor console bezel	*Center Console Top Component Views (X88/Z88)*	*S31P Seat Heating and Cooling Switch - Passenger*
S33	Horn Switch	—	In the passenger compartment, in the center of the steering wheel, behind the driver side air bag	—	—
S38	Ignition Mode Switch	BTM	In the passenger compartment, forward, left of center, in the instrument panel, right of steering column	• *Front of Instrument Panel Components (Z75)* • *Front of Instrument Panel Components (X88/Z88 with D07/DCK)*	*S38 Ignition Mode Switch*
S39	Ignition Switch	without BTM	In the passenger compartment, forward, behind the steering wheel, on the right side of the steering column	—	—
S43	Content Theft Deterrent Sensor Disable Switch	UTT	In the passenger compartment, overhead, in the overhead console	*Overhead Console Components*	*S43 Content Theft Deterrent Sensor Disable Switch*
S45B	Liftgate Control Switch - Interior	TB5 or TC2	In the passenger compartment, overhead, in the overhead console	*Overhead Console Components*	*S45B Liftgate Control Switch - Interior*
S46B	Liftgate Unlatch Switch	TB4	At the rear of the vehicle, in the liftgate	• *Rear of Vehicle Components (X88)* • *Rear of Vehicle Components (Z88)*	*S46B Liftgate Unlatch Switch*
S46	Liftgate Handle Switch	TB5	In the rear compartment, rear, right of center, in the liftgate, at the bottom	*Liftgate Components*	*S46 Liftgate Handle Switch*
S47D	Seat Memory Switch - Driver	A45	In the passenger compartment, on the driver door panel below the driver door arm rest	• *Driver Door Components (Z75)* • *Driver Door Components (X88 or Z88)*	*S47D Seat Memory Switch - Driver*
S48A	Multifunction Switch - Instrument Panel	X88 or Z88	In the passenger compartment, left side of the instrument panel, left of steering column	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	*S48A Multifunction Switch - Instrument Panel*
S48C	Multifunction Switch 1 - Instrument Panel	Z75	In the passenger compartment, near the center of the instrument panel, left of P17	*Front of Instrument Panel Components (Z75)*	*S48C Multifunction Switch 1 - Instrument Panel*
S48D	Multifunction Switch 2 - Instrument Panel	Z75	In the passenger compartment, near the center of the instrument panel, right of P17	*Front of Instrument Panel Components (Z75)*	*S48D Multifunction Switch 2 - Instrument Panel*
S51	Telematics Button Assembly	UE1	In the passenger compartment, forward, overhead, part of the rearview mirror at the bottom	*Overhead Console Components*	*S51 Telematics Button Assembly (DRZ)*

S52	Outside Rearview Mirror Switch	—	In the passenger compartment, forward of center, left side, on the driver door trim panel	• *Driver Door Components (X88 or Z88)* • *Driver Door Components (Z75)*	• *S52 Outside Rearview Mirror Switch (A45)* • *S52 Outside Rearview Mirror Switch (-A45)*
S63	Roof Beacon Switch	TRW	In the passenger compartment, behind the overhead console	—	—
S64D	Seat Adjuster Switch - Driver	—	In the passenger compartment, mounted to the outboard side of the driver seat cushion	• *Driver Seat Cushion Components (without ULT)* • *Driver Seat Cushion Components (ULT)*	• *S64D Seat Adjuster Switch - Driver X1 (A45)* • *S64D Seat Adjuster Switch - Driver X1 (-A45)* • *S64D Seat Adjuster Switch - Driver X2*
S64P	Seat Adjuster Switch - Passenger	—	In the passenger compartment, mounted to the outboard side of the passenger seat cushion	*Passenger Seat Cushion Components (without ULT)*	• *S64P Seat Adjuster Switch - Passenger X1 ((AG2+AG6)-ULT)* • *S64P Seat Adjuster Switch - Passenger X1 ((AG2-AG6)-ULT)* • *S64P Seat Adjuster Switch - Passenger X1 (AG2+ULT)* • *S64P Seat Adjuster Switch - Passenger X2*
S70E	Steering Wheel Controls Switch - Radio Presets	X88 or Z88 with UK3	In the passenger compartment, on the left rear side of the steering wheel	*Steering Wheel Components (X88 or Z88)*	*S70E Steering Wheel Controls Switch - Radio Presets*
S70F	Steering Wheel Controls Switch - Radio Volume	X88 or Z88 with UK3	In the passenger compartment, on the right rear side of the steering wheel	*Steering Wheel Components (X88 or Z88)*	*S70F Steering Wheel Controls Switch - Radio Volume*
S70L	Steering Wheel Controls Switch - Left	—	In the passenger compartment, on the left side of the steering wheel	• *Steering Wheel Components (Z75)* • *Steering Wheel Components (X88 or Z88)*	• *S70L Steering Wheel Controls Switch - Left (X88)* • *S70L Steering Wheel Controls Switch - Left (Z88)*
S70R	Steering Wheel Controls Switch - Right	—	In the passenger compartment, on the right side of the steering wheel	• *Steering Wheel Components (Z75)* • *Steering Wheel Components (X88 or Z88)*	• *S70R Steering Wheel Controls Switch - Right (X88)* • *S70R Steering Wheel Controls Switch - Right (Z88)*
S71	Steering Column Tilt and Telescope Switch	N38	In the passenger compartment, forward, left side, on the steering column	—	—
S72	Sunroof Switch	CF5	In the passenger compartment, overhead, forward of center, in the overhead console	*Overhead Console Components*	*S72 Sunroof Switch*
S74	Tow/Haul Mode Switch	—	In the passenger compartment, part of the transmission shift lever	*Steering Column Components (2 of 2)*	—
S76	Trailer Brake Control Switch	JL1	In the passenger compartment, forward, left side, on instrument panel, left of steering column	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	*S76 Trailer Brake Control Switch*

S77	Transfer Case Shift Control Switch	NP0 or NQH	In the passenger compartment, left side, on instrument panel, left of steering column	• *Front of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Front of Instrument Panel Components (Z75)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	*S77 Transfer Case Shift Control Switch*
S78	Turn Signal/Multifunction Switch	—	In the passenger compartment, left side, on the left side of the steering column	*Steering Column Components (2 of 2)*	• *S78 Turn Signal/Multifunction Switch X1* • *S78 Turn Signal/Multifunction Switch X2* • *S78 Turn Signal/Multifunction Switch X3*
S79D	Window Switch - Driver	—	In the passenger compartment, behind the driver door trim panel, center of the door	• *Driver Door Components (X88 or Z88)* • *Driver Door Components (Z75)*	*S79D Window Switch - Driver*
S79LR	Window Switch - Left Rear	—	In the passenger compartment, at the center of the left rear door, on the door trim panel	• *Left Rear Door Components (Z75)* • *Left Rear Door Components (X88 or Z88)*	*S79LR Window Switch - Left Rear*
S79P	Window Switch - Passenger	—	In the passenger compartment, on the passenger door trim panel, center of the door	• *Passenger Door Components (Z75)* • *Passenger Door Components (X88 or Z88)*	• *S79P Window Switch - Passenger (A45)* • *S79P Window Switch - Passenger (-A45)*
S79RR	Window Switch - Right Rear	—	In the passenger compartment, on the right rear door trim panel, center of the door	• *Right Rear Door Components (Z75)* • *Right Rear Door Components (X88 or Z88)*	*S79RR Window Switch - Right Rear*
S91	Park Brake Control Switch	J71	In the passenger compartment, left side, on the instrument panel knee bolster	*Front of Instrument Panel Components (Z75)*	*S91 Park Brake Control Switch*
S135	Rollover Protection Disable Switch	C9I	In the passenger compartment, center, in instrument panel	*Front of Instrument Panel Components (X88/Z88 without D07/DCK)*	*S135 Rollover Protection Disable Switch*
S140	Media Disc Eject Switch	Z75	In the passenger compartment, on the face of the instrument panel center stack below the radio/HVAC controls	*Front of Instrument Panel Components (Z75)*	*S140 Media Disc Eject Switch*
S141	Liftgate Window Unlatch Switch	—	At the rear of the vehicle, in the liftgate, center, in the top right of the license plate bezel	*Rear of Vehicle Components (Z75)*	*S141 Liftgate Window Unlatch Switch*
S143L	Folding Seat Control Switch - 2nd Row Left	ATN or ATT	In the passenger compartment, left side, on C-Pillar trim	—	*S143L Folding Seat Control Switch - 2nd Row Left*
S143R	Folding Seat Control Switch - 2nd Row Right	ATN or ATT	In the passenger compartment, right side, on C-Pillar trim	—	*S143R Folding Seat Control Switch - 2nd Row Right (ATN/ATT)*
S144A	Folding Seat Control Switch - Rear Compartment 2nd Row	ATN or ATT	In the rear compartment, right side, in the trim under the quarter window glass	—	*S144A Folding Seat Control Switch - Rear Compartment 2nd Row*
S144B	Folding Seat Control Switch - Rear Compartment 3rd Row	AS8	In the rear compartment, right side, in the trim under the quarter window glass	—	*S144B Folding Seat Control Switch - Rear Compartment 3rd Row*

S145	Center Console Compartment Cooler Switch	DCK	In the passenger compartment, forward of center, in floor console between the driver and passenger seat	*Center Console Top Component Views (X88/Z88)*	● *S145 Center Console Compartment Cooler Switch (X88/Z88)* ● *S145 Center Console Compartment Cooler Switch (Z75)*
T1	Accessory DC/AC Power Inverter Module	KI4 or KI5	In the passenger compartment, Inside the instrument panel, right side of the steering column	● *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* ● *Back of Instrument Panel Components (Z75)* ● *Back of Instrument Panel Components (X88/Z88 without D07/DCK)*	*T1 Accessory DC/AC Power Inverter Module*
T2	Antenna	—	Internal to the K89 Immobilizer Control Module	—	—
T3	Audio Amplifier	UQA, UQH or UQS	In the rear compartment, behind the left rear quarter trim.	*Left Rear Cargo Area Components*	● *T3 Audio Amplifier X1 (UQA/UQH/UQS+AZ3)* ● *T3 Audio Amplifier X1 (UQA/UQH/UQS+D07)* ● *T3 Audio Amplifier X2 (UQA/UQH/UQS)* ● *T3 Audio Amplifier X3 (UQA/UQH/UQS)* ● *T3 Audio Amplifier X4 (UQA/UQH/UQS)*
T4G	Cellular Phone, Navigation, and Digital Radio Antenna	—	Outside of the vehicle, on the roof, left front, near windshield	● *Front of Vehicle Components (X88)* ● *Front of Vehicle Components (Z88)* ● *Front of Vehicle Components (Z75)*	—
T4M	Radio Antenna	—	In the rear compartment, right side, top of the right rear quarter glass	—	—
T4S	Wireless Communication Antenna - Bluetooth	UPF	In the passenger compartment, center of the instrument panel, behind the radio, attached to the K73 Telematics Communication Interface Control Module	—	—
T4U	Auxiliary Audio Transmitter Antenna	AYE	In the passenger compartment, in the floor console, left side under the instrument panel	—	—
T7L	Headlamp Ballast - Left	T4F	Outside the vehicle, left front corner, inside the headlamp	● *Headlamp Components (X88)* ● *Headlamp Components (Z88)*	—
T7R	Headlamp Ballast - Right	T4F	Outside the vehicle, right front corner, inside the headlamp	● *Headlamp Components (X88)* ● *Headlamp Components (Z88)*	—
T8A	Ignition Coil 1	—	In the engine compartment, at the top front, left side of the engine, near cylinder 1	● *Left Rear Side of Engine Components (L96)* ● *Top of Engine Components (L83 or L86)*	● *T8A Ignition Coil 1 (L83/L86)* ● *T8A Ignition Coil 1 (L86)* ● *T8A Ignition Coil 1 (L96)*

T8B	Ignition Coil 2	—	In the engine compartment, at the top front, right side of the engine, near cylinder 2	• *Top of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	• *T8B Ignition Coil 2 (L83/L86)* • *T8B Ignition Coil 2 (L86)* • *T8B Ignition Coil 2 (L96)*
T8C	Ignition Coil 3	—	In the engine compartment, at the top forward of middle, left side of the engine, near cylinder 3	• *Left Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	• *T8C Ignition Coil 3 (L83/L86)* • *T8C Ignition Coil 3 (L86)* • *T8C Ignition Coil 3 (L96)*
T8D	Ignition Coil 4	—	In the engine compartment, at the top forward of middle, right side of the engine, near cylinder 4	• *Top of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	• *T8D Ignition Coil 4 (L83/L86)* • *T8D Ignition Coil 4 (L86)* • *T8D Ignition Coil 4 (L96)*
T8E	Ignition Coil 5	—	In the engine compartment, at the top rear of middle, left side of the engine, near cylinder 5	• *Left Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	• *T8E Ignition Coil 5 (L83/L86)* • *T8E Ignition Coil 5 (L86)* • *T8E Ignition Coil 5 (L96)*
T8F	Ignition Coil 6	—	In the engine compartment, at the top rear of middle, right side the engine, near cylinder 6	• *Top of Engine Components (L83 or L86)* • *Right Rear Side of Engine Components (L96)*	• *T8F Ignition Coil 6 (L83/L86)* • *T8F Ignition Coil 6 (L86)* • *T8F Ignition Coil 6 (L96)*
T8G	Ignition Coil 7	—	In the engine compartment, at the top rear, left side of the engine, near cylinder 7	• *Left Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	• *T8G Ignition Coil 7 (L83/L86)* • *T8G Ignition Coil 7 (L86)* • *T8G Ignition Coil 7 (L96)*
T8H	Ignition Coil 8	—	In the engine compartment, at the top rear, right side of the engine, near cylinder 8	• *Right Rear Side of Engine Components (L96)* • *Top of Engine Components (L83 or L86)*	• *T8H Ignition Coil 8 (L83/L86)* • *T8H Ignition Coil 8 (L86)* • *T8H Ignition Coil 8 (L96)*
T10E	Keyless Entry Antenna - Rear Compartment	ATH or BTM	In the passenger compartment, left side, just rearward of the C-pillar, on the floor	—	*T10E Keyless Entry Antenna - Rear Compartment*
T10G	Keyless Entry Antenna - Rear Fascia	ATH or BTM	At the rear of the vehicle, left of center, mounted on the back of the rear fascia, left of center	*Behind Rear Fascia Components*	*T10G Keyless Entry Antenna - Rear Fascia*
T10J	Keyless Entry Antenna - Center Console Front	ATH or BTM	In the passenger compartment, in the instrument panel under the center stack info display	*Front of Instrument Panel Components (X88/Z88 with D07/DCK)*	*T10J Keyless Entry Antenna - Center Console Front*
T10K	Keyless Entry Antenna - Center Console Rear	ATH or BTM	In the passenger compartment, at the back of the floor console near the auxiliary HVAC controls	• *Center Console Rear Component Views (X88/Z88)* • *Center Console Top Component Views (Z75)*	*T10K Keyless Entry Antenna - Center Console Rear*
T10M	Keyless Entry Antenna - Driver Door Handle	ATH or BTM	Outside the vehicle, on the driver door, part of the door handle assembly	—	—
T10N	Keyless Entry Antenna - Passenger Door Handle	ATH or BTM	Outside the vehicle, on the passenger door, part of the door handle assembly	—	—

T15	Navigation Antenna Signal Splitter	IO6 with UE1	In the passenger compartment, on top of the instrument panel, under top cover, right of center, near windshield	• *Back of Instrument Panel Components (Z75)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)* • *Back of Instrument Panel Components (X88/Z88 without D07/DCK)*	—
T22	Mobile Device Wireless Charger Module	K4C	In the passenger compartment, forward of center, in the floor console bin lid.	• *Center Console Top Component Views (X88/Z88)* • *Center Console Rear Component Views (Z75)*	*T22 Mobile Device Wireless Charger Module*
T23	Radio Antenna Amplifier	—	In the rear compartment, right side, above rear quarter glass, behind the headliner	—	—
X50A	Fuse Block - Underhood	—	In the engine compartment, front left rear	*Left Side of Engine Compartment Component View*	Electrical Center Identification Views
X50D	Fuse Block - Battery	—	In the engine compartment, top right, on the battery	*Right Rear of Engine Compartment Components (2 of 2)*	Electrical Center Identification Views
X50E	Fuse Block - Battery Auxiliary	5W4 or 9C1	In the engine compartment, front left, on the auxiliary battery	—	Electrical Center Identification Views
X51L	Fuse Block - Instrument Panel Left	—	In the passenger compartment, left side of the instrument panel, behind access panel	*Left Front of Passenger Compartment Views (Z75)*	Electrical Center Identification Views
X51R	Fuse Block - Instrument Panel Right	—	In the passenger compartment, right side of the instrument panel, behind access panel	—	Electrical Center Identification Views
X53A	Fuse Block - Rear Body	—	In the rear compartment, left side, behind the access door in the rear compartment trim	—	Electrical Center Identification Views
X55X	Fuse Holder - Video Display	AYE	In the passenger compartment, underside of instrument panel, left side, above the lower instrument panel close out panel	—	Electrical Center Identification Views
X61A	Junction Block - Instrument Panel	—	In the passenger compartment, under the instrument panel, left side footwell	• *Behind Left Side of Instrument Panel Components (1 of 2)* • *Behind Left Side of Instrument Panel Components (2 of 2)*	Electrical Center Identification Views
X80D	Accessory Power Receptacle - Center Console Compartment	D07 or DCK	In the passenger compartment, between the driver and passenger seat, in the center floor console compartment	• *Center Console Top Component Views (Z75)* • *Center Console Internal Component Views (X88/Z88)* • *Center Seat Components (AZ3)*	• *X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+D07)* • *X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+DCK)* • *X80D Accessory Power Receptacle - Center Console Compartment (AZ3)* • *X80D Accessory Power Receptacle - Center Console Compartment (Z75+D07)* • *X80D Accessory Power Receptacle - Center Console Compartment (Z75+DCK)*

X80D	Accessory Power Receptacle - Center Console Compartment	AZ3	In the passenger compartment, between the driver and passenger seat, in the center seat console compartment	• *Center Console Top Component Views (Z75)* • *Center Console Internal Component Views (X88/Z88)* • *Center Seat Components (AZ3)*	• *X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+D07)* • *X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+DCK)* • *X80D Accessory Power Receptacle - Center Console Compartment (AZ3)* • *X80D Accessory Power Receptacle - Center Console Compartment (Z75+D07)* • *X80D Accessory Power Receptacle - Center Console Compartment (Z75+DCK)*
X80E	Accessory Power Receptacle - Center Seat	AZ3	In the passenger compartment, in the front center seat, at the rear of the center seat	*Center Seat Components (AZ3)*	*X80E Accessory Power Receptacle - Center Seat*
X80G	Accessory Power Receptacle - Instrument Panel	D07 or DCK	In the passenger compartment, on top of the floor console, below the info display on the center stack	• *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Center Console Top Component Views (Z75)* • *Center Console Top Component Views (X88/Z88)*	• *X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+D07)* • *X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+DCK)* • *X80G Accessory Power Receptacle - Instrument Panel (AZ3)* • *X80G Accessory Power Receptacle - Instrument Panel (Z75)*
X80G	Accessory Power Receptacle - Instrument Panel	AZ3	In the passenger compartment, in the instrument panel below the info display on the center stack	• *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Center Console Top Component Views (Z75)* • *Center Console Top Component Views (X88/Z88)*	• *X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+D07)* • *X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+DCK)* • *X80G Accessory Power Receptacle - Instrument Panel (AZ3)* • *X80G Accessory Power Receptacle - Instrument Panel (Z75)*
X80L	Accessory Power Receptacle - Center Console Rear	D07	In the passenger compartment, at the rear of the floor center console	• *Center Console Rear Component Views (Z75)* • *Center Console Rear Component Views (X88/Z88)*	*X80L Accessory Power Receptacle - Center Console Rear*
X80RL	Accessory Power Receptacle - Rear Compartment Left	—	In the passenger compartment, rear, left side, behind the C-Pillar in the molded in arm rest of the quarter panel trim.	—	*X80RL Accessory Power Receptacle - Rear Compartment Left*
X80RR	Accessory Power Receptacle - Rear Compartment Right	—	In the rear compartment, right side, in the molded quarter panel trim, underneath the rear quarter glass	—	*X80RR Accessory Power Receptacle - Rear Compartment Right*
X81B	Accessory Power Receptacle - 220V AC	KI5 with AZ3	In the passenger compartment, center of the instrument panel, below the HVAC controls	—	—
X81B	Accessory Power Receptacle - 220V AC	KI5 with D07 or DCK	In the passenger compartment, at the rear of the floor center console	—	—

X81	Accessory Power Receptacle - 110V AC	KI4 with AZ3	In the passenger compartment, center of the instrument panel, below the HVAC controls	• *Center Console Rear Component Views (X88/Z88)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Center Console Rear Component Views (Z75)*	• *X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+D07)* • *X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+DCK)* • *X81 Accessory Power Receptacle - 110V AC X1 (AZ3)* • *X81 Accessory Power Receptacle - 110V AC X1 (Z75+D07)* • *X81 Accessory Power Receptacle - 110V AC X1 (Z75+DCK)* • *X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+D07)* • *X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+DCK)* • *X81 Accessory Power Receptacle - 110V AC X2 (AZ3)* • *X81 Accessory Power Receptacle - 110V AC X2 (Z75+D07)* • *X81 Accessory Power Receptacle - 110V AC X2 (Z75+DCK)*
X81	Accessory Power Receptacle - 110V AC	KI4 with D07 or DCK	In the passenger compartment, at the rear of the floor center console	• *Center Console Rear Component Views (X88/Z88)* • *Front of Instrument Panel Components (X88/Z88 without D07/DCK)* • *Center Console Rear Component Views (Z75)*	• *X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+D07)* • *X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+DCK)* • *X81 Accessory Power Receptacle - 110V AC X1 (AZ3)* • *X81 Accessory Power Receptacle - 110V AC X1 (Z75+D07)* • *X81 Accessory Power Receptacle - 110V AC X1 (Z75+DCK)* • *X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+D07)* • *X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+DCK)* • *X81 Accessory Power Receptacle - 110V AC X2 (AZ3)* • *X81 Accessory Power Receptacle - 110V AC X2 (Z75+D07)* • *X81 Accessory Power Receptacle - 110V AC X2 (Z75+DCK)*
X82	Audio/Video Input Adapter	U42 with D07	In the passenger compartment, at the rear of the floor center console	• *Center Console Rear Component Views (Z75)* • *Center Console Rear Component Views (X88/Z88)*	*X82 Audio/Video Input Adapter X1*

X83	Auxiliary Audio Input	D07 or DCK	In the passenger compartment, in the floor center console compartment	• *Center Console Internal Component Views (X88/Z88)* • *Center Seat Components (AZ3)* • *Center Console Top Component Views (Z75)*	• *X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO3)* • *X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO5/IO6)* • *X83 Auxiliary Audio Input X1 ((X88/Z88)+DCK)* • *X83 Auxiliary Audio Input X1 (AZ3)* • *X83 Auxiliary Audio Input X1 (Z75+D07)* • *X83 Auxiliary Audio Input X1 (Z75+DCK)*
X83	Auxiliary Audio Input	AZ3	In the passenger compartment, in the center seat compartment	• *Center Console Internal Component Views (X88/Z88)* • *Center Seat Components (AZ3)* • *Center Console Top Component Views (Z75)*	• *X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO3)* • *X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO5/IO6)* • *X83 Auxiliary Audio Input X1 ((X88/Z88)+DCK)* • *X83 Auxiliary Audio Input X1 (AZ3)* • *X83 Auxiliary Audio Input X1 (Z75+D07)* • *X83 Auxiliary Audio Input X1 (Z75+DCK)*
X84	Data Link Connector	—	In the passenger compartment, left side, at the bottom of the driver side of the instrument panel	• *Front of Instrument Panel Components (Z75)* • *Back of Instrument Panel Components (X88/Z88 with D07/DCK)*	*X84 Data Link Connector*
X85	Steering Wheel Air Bag Coil	—	In the passenger compartment, left side, on the steering column, behind the steering wheel	• *Steering Column Components (2 of 2)* • *Left Front of Passenger Compartment Views (Z75)*	*X85 Steering Wheel Air Bag Coil*
X88	Trailer Connector	without VQ9	On the vehicle exterior, at the rear of the vehicle, left of the license plate	*Chassis Harness Routing*	*X88 Trailer Connector*
X92A	USB Receptacle - Instrument Panel Compartment	IO5 or IO6	In the passenger compartment, forward and center, in the instrument panel, behind the screen of the P17 Info Display	—	—
X92	USB Receptacle	D07 with IO5 or IO6	In the passenger compartment, at the top of the floor console, below instrument panel center stack	• *Center Console Top Component Views (Z75)* • *Center Console Top Component Views (X88/Z88)*	• *X92 USB Receptacle (X88/Z88)* • *X92 USB Receptacle (Z75)*
X100	Front Bumper Harness to Forward Lamp Harness (16 Cavities)	X88 or Z88	At the front of the vehicle, right of center, on top of the core support	*Forward Lamp Harness Routing - Right Engine Compartment*	*X100 Front Bumper Harness to Forward Lamp Harness (X88/Z88)*
X100	Front Bumper Harness to Forward Lamp Harness (40 Cavities)	Z75	At the front of the vehicle, right of center, on top of the core support	*Forward Lamp Harness Routing - Right Engine Compartment*	*X100 Front Bumper Harness to Forward Lamp Harness (Z75+AVF)*

X101	Front Bumper Harness to Left Multifunction Lamp Harness (8 Cavities)	Z75	At the front of the vehicle, left side, behind the front bumper	—	*X101 Front Fascia Harness to Left Multifunction Lamp Harness*
X104	Front Bumper Harness to Right Multifunction Lamp Harness (8 Cavities)	Z75	At the front of the vehicle, right side, behind the front bumper	—	*X104 Front Fascia Harness to Right Multifunction Lamp Harness*
X106	Aero Shutter Harness to Forward Lamp Harness (6 Cavities)	Z75	At the front of the vehicle, at center, behind upper grille at hood latch	—	*X106 Aero Shutter Jumper Harness to Forward Lamp Harness*
X110	Forward Lamp Harness to Left Headlamp Harness (8 Cavities)	—	In the engine compartment, at the rear of the left headlamp assembly	*Forward Lamp Harness Routing - Left Engine Compartment*	• *X110 Forward Lamp Harness to Left Headlamp Harness (X88)* • *X110 Forward Lamp Harness to Left Headlamp Harness (Z75)* • *X110 Forward Lamp Harness to Left Headlamp Harness (Z88)*
X111	Front Axle Jumper Harness to Engine Harness (4 Cavities)	NP0 or NQH	In the engine compartment, left front, above the front axle	• *Engine Harness Routing - Left Rear (L96)* • *Engine Harness Routing - Left Front (L83 or L86)*	*X111 Transfer Case Harness to Engine Harness*
X115	Engine Harness to Body Harness (48 Cavities)	—	In the front of the engine compartment, left side, at front of Underhood Fuse Block	• *Engine Harness Routing - Left Rear (L96)* • *Body Harness Routing - Engine Compartment Top* • *Engine Harness Routing - Left Front (L83 or L86)*	*X115 Engine Harness to Body Harness*
X119	Body Harness to Brake Clutch Jumper Harness (16 Cavities)	—	In the passenger compartment, left side of the instrument panel, on IP junction block	*Body Harness Routing - Left Front of Passenger Compartment*	*X119 Body Harness to Brake Clutch Jumper Harness*
X120	Forward Lamp Harness to Right Headlamp Harness (8 Cavities)	—	In the engine compartment, at the rear of the right headlamp assembly	*Forward Lamp Harness Routing - Right Engine Compartment*	• *X120 Forward Lamp Harness to Right Headlamp Harness (X88)* • *X120 Forward Lamp Harness to Right Headlamp Harness (Z75)* • *X120 Forward Lamp Harness to Right Headlamp Harness (Z88)*
X122	Forward Lamp Harness to Forward Lamp Harness (6 Cavities)	6J7	In the engine compartment, towards the front, right side, forward of the right hand wheel well	*Forward Lamp Harness Routing - Right Engine Compartment*	*X122 Forward Lamp Harness to Forward Lamp Harness*
X125	Engine Harness to Chassis Harness (20 Cavities)	—	In the engine compartment, on the top left of the frame rail, near the top of the left front shock	• *Front Axle Harness Routing* • *Engine Harness Routing - Left Front (L83 or L86)* • *Chassis Harness Routing* • *Engine Harness Routing - Left Rear (L96)*	*X125 Engine Harness to Chassis Harness*
X139	Engine Harness to Forward Lamp Harness (8 Cavities)	—	in the engine compartment, left side, near center, inboard of underhood fuse block, below X125	• *Forward Lamp Harness Routing - Left Engine Compartment* • *Engine Harness Routing - Left Front (L83 or L86)*	• *X139 Engine Harness to Forward Lamp Harness (L83/L86)* • *X139 Engine Harness to Forward Lamp Harness (L96)*

X150	Body Harness to Forward Lamp Harness (23 Cavities)	—	In the engine compartment, above the right front wheel well, between the battery and the inner fender	• *Body Harness Routing - Engine Compartment Top* • *Forward Lamp Harness Routing - Right Engine Compartment*	• *X150 Body Harness to Forward Lamp Harness (L83/L86)* • *X150 Body Harness to Forward Lamp Harness (L96)*
X154	Engine Harness to Camshaft Jumper Harness (8 Cavities)	—	In the engine compartment, Front of engine, near power steering pulley	*Engine Harness Routing - Left Front (L83 or L86)*	*X154 Engine Harness to Camshaft Jumper Harness*
X158	Auxiliary Battery Harness to Engine Harness (6 Cavities)	5W4 or 9C1	In the engine compartment, right of center	—	*X158 Battery Harness to Engine Harness*
X160	Engine Harness to Odd Fuel Injector Harness (12 Cavities)	L83 or L86	In the engine compartment, rear of the engine near the top center	*Engine Harness Routing - Right Rear (L83 or L86)*	*X160 Engine Harness to Odd Fuel Injector Harness*
X161	Engine Harness to Even Fuel Injector Harness (12 Cavities)	L83 or L86	In the engine compartment, rear of the engine near the top right	*Engine Harness Routing - Right Rear (L83 or L86)*	*X161 Engine Harness to Even Fuel Injector Harness*
X170	Engine Harness to Ignition Coil (Odd) Harness (8 Cavities)	L96	On the engine, near the odd ignition coils	—	*X170 Engine Harness to Ignition Coil (Odd) Harness (L96)*
X171	Engine Harness to Ignition Coil (Even) Harness (8 Cavities)	L96	On the engine, near the even ignition coils	*Engine Harness Routing - Left Rear (L96)*	*X171 Engine Harness to Ignition Coil (Even) Harness*
X175	Engine Harness to Transmission Harness (36 Cavities)	M5U	Under the vehicle, forward of center, on the right side of the transmission, forward of the transfer case	*Engine Harness Routing - Right Rear (L83 or L86)*	*X175 Engine Harness to Transmission Harness (M5U)*
X176	Transmission Harness to Transmission Harness (22 Cavities)	M5U	Underside of the vehicle, forward of middle, internal to the transmission	—	—
X177	Transmission Harness to Transmission Harness (6 Cavities)	M5U	Underside of the vehicle, forward of middle, internal to the transmission	—	—
X182	Chassis Harness to Power Steering Jumper Harness (12 Cavities)	—	In the engine compartment, front left side, on the cross rail, on the left frame rail.	*Chassis Harness Routing*	*X182 Chassis Harness to Power Steering Jumper Harness*
X183	Battery Harness to Power Steering Jumper Harness (2 Cavities)	—	In the engine compartment, front, on the cross rail, below the crank shaft pulley	—	—
X185	Chassis Harness to Body Harness (40 Cavities)	—	In the rear of the engine compartment, right rear of the under hood fuse block	• *Chassis Harness Routing* • *Body Harness Routing - Engine Compartment Top*	*X185 Chassis Harness to Body Harness*
X195	Body Harness to Underhood Harness (4 Cavities)	5W4 or 9C1	In the engine compartment, right side	—	*X195 Body Harness to Underhood Harness*
X201	Steering Column Harness to Instrument Panel Harness (42 Cavities)	—	In the passenger compartment, behind the left side of the instrument panel, above the Body Control Module	*Instrument Panel Harness Routing - Rear of Instrument Panel*	*X201 Steering Column Harness to Instrument Panel Harness*
X203	Headliner Harness to Instrument Panel Harness (12 Cavities)	—	In the passenger compartment, forward, left side, in the top of the instrument panel near the left instrument panel speaker	• *Instrument Panel Harness Routing - Rear of Instrument Panel* • *Headliner Harness Routing*	*X203 Headliner Harness to Instrument Panel Harness*

X204	Instrument Panel Harness LVDS to Headliner Harness LVDS	U42	In the passenger compartment, forward, left side, in the top of the instrument panel, near the left instrument panel speaker	• *Headliner Harness Routing* • *Instrument Panel Harness Routing - Rear of Instrument Panel*	• *X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 with DNU)* • *X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 without DNU)*
X205	Instrument Panel Harness to Passenger Air Bag Jumper Harness (4 Cavities)	—	In the passenger compartment, behind the right side of the instrument panel, right side of blower motor HVAC caser	*Instrument Panel Harness Routing - Rear of Instrument Panel*	*X205 Instrument Panel Harness to Passenger Air Bag Jumper Harness*
X212	GPS Antenna Jumper COAX to Instrument Panel Harness COAX (1 Cavity)	CV3 with UE1	In the passenger compartment, forward, right of center, in instrument panel near K73	—	—
X215	HVAC Harness to Instrument Panel Harness (14 Cavities)	—	In the passenger compartment, behind the upper right side of the instrument panel defroster deflector	• *HVAC Assembly Harness Routing* • *Instrument Panel Harness Routing - Rear of Instrument Panel*	*X215 HVAC Harness to Instrument Panel Harness*
X216	Body Harness to HVAC Harness (20 Cavities)	—	In the passenger compartment, behind the lower right side of the instrument panel glove box, on the HVAC case	• *Body Harness Routing - Right Front of Passenger Compartment* • *HVAC Assembly Harness Routing*	*X216 Body Harness to HVAC Harness*
X217	Body Harness to HVAC Harness (2 Cavities)	—	In the passenger compartment, behind the lower right side of the instrument panel glove box, on the HVAC case	• *Body Harness Routing - Right Front of Passenger Compartment* • *HVAC Assembly Harness Routing*	*X217 Body Harness to HVAC Harness*
X221	Instrument Panel COAX to Headliner Harness COAX (1 Cavity)	—	In the passenger compartment, forward, right side, top of instrument panel, under defrost deflector, at the Navigation Antenna Splitter	—	—
X222	Instrument Panel Harness COAX to A-Pillar Harness COAX (2 Cavities)	UE1	In the passenger compartment, forward, right side, top of instrument panel, below the defrost deflector	*Instrument Panel Harness Routing - Rear of Instrument Panel*	• *X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)+IO6* • *X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)-IO6*
X225	Body Harness to Instrument Panel Harness (42 Cavities)	—	In the passenger compartment, forward, right side, below the Instrument panel, in the driver foot well, behind the kick panel	• *Body Harness Routing - Left Front of Passenger Compartment* • *Instrument Panel Harness Routing - Rear of Instrument Panel*	*X225 Body Harness to Instrument Panel Harness*
X238	Body Harness USB to Instrument Panel Harness USB	AZ3	In the passenger compartment, front, below right side of Instrument Panel, behind kick panel	*Instrument Panel Harness Routing - Rear of Instrument Panel*	*X238 Body Harness USB to Instrument Panel Harness USB (AZ3)*
X245	Instrument Panel Harness COAX to A-Pillar Harness COAX (1 Cavity)	U2K or U2M	In the passenger compartment, forward, right side, top of instrument panel, below the defrost deflector, at the Navigation Splitter	—	—
X271	Instrument Panel Harness to Instrument Panel Harness (8 Cavities)	WX7	In the front of the passenger compartment, in the instrument panel	*Instrument Panel Harness Routing - Bottom Center*	*X271 Instrument Panel Harness to Instrument Panel Harness*
X272	Instrument Panel Harness to Upfitter Jumper (6 Cavities)	6J3 or 6J7	In the passenger compartment, under the center of the instrument panel	*Instrument Panel Harness Routing - Bottom Center*	*X272 Instrument Panel Harness to Upfitter Jumper Harness*

X273	Body Harness to Body Harness (1 Cavity)	6J4	In the passenger compartment, under the left side of the instrument panel, near body control module	—	*X273 Body Harness to Body Harness*
X275	Instrument Panel Harness to Body Harness (42 Cavities)	—	In the passenger compartment, right side, below the Instrument panel, in the passenger foot well, behind the kick panel	• *Instrument Panel Harness Routing - Rear of Instrument Panel* • *Body Harness Routing - Right Front of Passenger Compartment*	*X275 Instrument Panel Harness to Body Harness*
X295	Instrument Panel Harness to Body Harness (12 Cavities)	Z75	In the passenger compartment, about 11cm (4 inches) from the breakout for the data link connector	—	*X295 Instrument Panel Harness to Body Harness (Z75)*
X300	Instrument Panel Harness to Floor Console Harness (42 Cavities)	D07	In the passenger compartment, underneath floor console cup holders	• *Floor Console Harness Routing - Top (X88 or Z88)* • *Floor Console Harness Routing - Bottom Front (Z75)* • *Instrument Panel Harness Routing - Bottom Center*	*X300 Instrument Panel Harness to Floor Console Harness*
X301	Instrument Panel Harness USB to Floor console Harness USB	DCK/D07 with U42	In the passenger compartment, underneath floor console cup holders	—	*X301 Instrument Panel Harness USB to Floor console Harness USB (D07/DCK with U42)*
X302	Floor Console Harness USB to Instrument Panel Harness USB	D07	In the passenger compartment, underneath floor console cup holders, next to X300	*Instrument Panel Harness Routing - Bottom Center*	• *X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK with U42)* • *X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK without U42)*
X303	Floor Console Harness USB to Instrument Panel Harness USB	D07	In the passenger compartment, front center, underneath floor console cup holders, next to X300	*Instrument Panel Harness Routing - Bottom Center*	*X303 Floor Console Extension Harness USB to Instrument Panel Harness USB (D07/DCK with U42)*
X304	Body Harness USB to Center Seat Harness USB	AZ3	In the passenger compartment, under the front center seat	• *Floor Console Harness Routing - Bottom Front (Z75)* • *Floor Console Harness Routing - Top (X88 or Z88)*	*X304 Body Harness USB to Center Seat Harness USB (AZ3)*
X305	Instrument Panel Harness to Power Receptacle Jumper Harness (12 Cavities)	KI5	In the passenger compartment, in the instrument panel	—	*X305 Instrument Panel Harness to Instrument Panel Extension Harness*
X306	Instrument Panel Harness to Floor Console Harness (6 Cavities)	KI4 or KI5 with D07	In the passenger compartment, center, underneath floor console cup holders, next to X300	• *Instrument Panel Harness Routing - Bottom Center* • *Floor Console Harness Routing - Bottom Front (Z75)* • *Floor Console Harness Routing - Top (X88 or Z88)*	*X306 Instrument Panel Harness to Floor Console Harness*
X307	Floor Console Harness to Floor Console Harness (14 Cavities)	X88 or Z88 with D07	In the passenger compartment, center, underneath the floor console cup holders, next to X300	*Floor Console Harness Routing - Top (X88 or Z88)*	*X307 Floor Console Harness to Floor Console Extension Harness*

X308	Body Harness to 2nd Row Seat Jumper Harness (8 Cavities)	ATN, ATT or KA6	In the passenger compartment, left side, under second row seat cushion	- *Second Row Seat Harness Routing* - *Body Harness Routing - Left Middle of Passenger Compartment*	- *X308 Body Harness to Rear Seat Harness (X88/Z88)* - *X308 Body Harness to Rear Seat Harness*
X310	Driver Seat Harness to Body Harness (48 Cavities)	—	In the passenger compartment, left side, under the driver seat	- *Body Harness Routing - Left Front of Passenger Compartment* - *Driver Seat Harness Routing*	- *X310 Driver Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)* - *X310 Driver Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)* - *X310 Driver Seat Cushion Harness to Body Harness Z75+ULT* - *X310 Driver Seat Cushion Harness to Body Harness Z75-ULT*
X311	Driver Seat Back Harness to Driver Seat Cushion Harness (6 Cavities)	without ULT	In the passenger compartment, inside the driver seat, under the cushion	*Driver Seat Harness Routing*	*X311 Driver Seat Back Harness to Driver Seat Cushion Harness*
X312	Driver Seat Back Harness to Driver Seat Cushion Harness (14 Cavities)	ULT	In the passenger compartment, inside the driver seat, under the cushion	*Driver Seat Harness Routing*	- *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75+ULT)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75-ULT)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88-(AG1/A45/KQV)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88+(AG1/A45/KQV)*
X312	Driver Seat Back Harness to Driver Seat Cushion Harness (12 Cavities)	AG1 without ULT	In the passenger compartment, inside the driver seat, under the cushion	*Driver Seat Harness Routing*	- *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75+ULT)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75-ULT)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88-(AG1/A45/KQV)* - *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88+(AG1/A45/KQV)*

X312	Driver Seat Back Harness to Driver Seat Cushion Harness (2 Cavities)	without AG1 or ULT	In the passenger compartment, inside the driver seat, under the cushion	*Driver Seat Harness Routing*	• *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75+ULT)* • *X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75-ULT)* • *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88-(AG1/A45/KQV)* • *X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88+(AG1/A45/KQV)*
X313	Power Mat Jumper Harness to Floor Console Harness (3 Cavities)	DCK	In the passenger compartment, forward of center, in the floor console	• *Floor Console Harness Routing - Rear (X88 or Z88)* • *Floor Console Harness Routing - Bottom Front (Z75)* • *Floor Console Harness Routing - Top (X88 or Z88)*	*X313 Floor Console Extension Harness to Floor Console Harness*
X315	Headliner Harness to Body Harness (16 Cavities)	NKC, UGN or UTT	In the passenger compartment, forward, left side, behind left instrument panel access panel, near left instrument panel fuse block	• *Headliner Harness Routing* • *Body Harness Routing - Left Front of Passenger Compartment*	*X315 Headliner Harness to Body Harness*
X316	Headliner Harness to Overhead Console Harness (26 Cavities)	—	In the passenger compartment, in the headliner, above the over head console	• *Headliner Harness Routing* • *Overhead Console Harness Routing*	*X316 Headliner Harness to Overhead Console Harness*
X318	Rain Sensor Jumper Harness to A-Pillar Harness (3 Cavities)	—	In the passenger compartment, overhead, behind the inside rear view mirror	*A-Pillar Harness Routing - Right Passenger Compartment*	*X318 Rain Sensor Jumper Harness to Headliner Harness*
X319	A-Pillar Harness to Sunroof Harness (2 Cavities)	CF5 or TRW	In the passenger compartment, above the overhead console	• *Overhead Console Harness Routing* • *A-Pillar Harness Routing - Right Passenger Compartment*	*X319 A-Pillar Harness to Headliner Harness*
X320	Passenger Seat Harness to Body Harness (48 Cavities)	—	In the passenger compartment, right side, under the passenger seat	*Body Harness Routing - Right Front of Passenger Compartment*	• *X320 Passenger Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)* • *X320 Passenger Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)* • *X320 Passenger Seat Cushion Harness to Body Harness Z75+ULT* • *X320 Passenger Seat Cushion Harness to Body Harness Z75-ULT*
X321	Passenger Seat Back Harness to Passenger Seat Cushion Harness (6 Cavities)	without ULT	In the passenger compartment, inside the passenger seat, under the cushion	—	*X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness*

X322	Passenger Seat Back Harness to Passenger Seat Cushion Harness (14 Cavities)	ULT	In the passenger compartment, inside the passenger seat, under the cushion	—	• *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75+ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75-ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88-(AG2/A45/KQV)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88+(AG2/A45/KQV)*
X322	Passenger Seat Back Harness to Passenger Seat Cushion Harness (6 Cavities)	AG2 without ULT	In the passenger compartment, inside the passenger seat, under the cushion	—	• *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75+ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75-ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88-(AG2/A45/KQV)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88+(AG2/A45/KQV)*
X322	Passenger Seat Back Harness to Passenger Seat Cushion Harness (2 Cavities)	without AG2 or ULT	In the passenger compartment, inside the passenger seat, under the cushion	—	• *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75+ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75-ULT)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88-(AG2/A45/KQV)* • *X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88+(AG2/A45/KQV)*
X324	Sunroof Harness to Overhead Console Harness (10 Cavities)	CF5	In the passenger compartment, front of center, overhead, in the overhead console	*Overhead Console Harness Routing*	*X324 Sunroof Harness to Headliner Harness*
X338	Body Harness to 3rd Row Seat Left Harness (6 Cavities)	AS8	In the passenger compartment left side, under the third row seat cushion, at the left seat frame to floor mount	• *Body Harness Routing - Left Middle of Passenger Compartment* • *Third Row Seat Harness Routing*	*X338 Body Harness to 3rd Row Seat Left Harness*
X340	3rd Row Seat Right Harness to 3rd Row Seat Left Harness (6 Cavities)	AS8	In the passenger compartment, at the rear, inside the 3rd row seat, on seat frame between left and right seats	*Third Row Seat Harness Routing*	*X340 3rd Row Seat Right Harness to 3rd Row Seat Left Harness (AS8)*
X348	Center Seat Harness to Body Harness (16 Cavities)	AZ3	In the passenger compartment, forward of center, under the center seat	—	*X348 Center Seat Harness to Body Harness (AZ3+AVF)*
X353	Headliner Jumper COAX to Headliner COAX	(-SWB)+DRZ	In the passenger compartment, In the headliner	—	*X353 Headliner Jumper COAX to Headliner COAX (-SWB)+DRZ*
X354	Liftgate Jumper COAX to Headliner Jumper COAX	(SWB)+DRZ	In the passenger compartment, In the headliner, near the liftgate	—	*X354 Liftgate COAX to Headliner Jumper COAX (SWB)+DRZ*

X366	Rear Seat Entertainment Jumper Harness to Headliner Harness	—	In the passenger compartment, In the headliner	—	*X366 Rear Seat Entertainment Jumper Harness to Headliner Harness*
X371	Accessory Signal Harness 1A to Accessory Signal Harness 3A (6 Cavities)	AYE	In the passenger compartment, Bottom of driver seat, right side, where the seat back meets the seat cushion	—	—
X372	Accessory Signal Harness 2B to Accessory Signal Harness 3B (6 Cavities)	AYE	In the passenger compartment, Bottom of passenger seat, right side, where the seat back meets the seat cushion	—	—
X373	Accessory Signal Harness 2A to Accessory Signal Harness 3A (6 Cavities)	AYE	In the passenger compartment, Bottom of driver seat, right side, where the seat back meets the seat cushion	—	—
X374	Accessory Signal Harness 1B to Accessory Signal Harness 3B (6Cavities)	AYE	In the passenger compartment, Bottom of passenger seat, right side, where the seat back meets the seat cushion	—	—
X378	Body Harness to 2nd Row Seat Jumper Harness (8 Cavities)	ATN or ATT	In the passenger compartment, near center, right side, underneath second row seat, under carpet	*Second Row Seat Harness Routing*	*X378 Body Harness to Rear Seat Harness*
X380	Body Harness to Driver Roof Rail Air Bag Jumper (2 Cavities)	—	In the passenger compartment, at the left D-pillar, near the headliner	*Body Harness Routing - Left Rear of Passenger Compartment*	*X380 Body Harness to Driver Roof Rail Airbag Jumper Harness*
X390	Body Harness to Passenger Roof Rail Air Bag Jumper (2 Cavities)	—	In the passenger compartment, at the right D-pillar, near the headliner	*Body Harness Routing - Right Rear of Passenger Compartment*	*X390 Body Harness to Driver Roof Rail Air Bag Jumper Harness*
X410	Left Tail Lamp Jumper to Chassis Harness (6 Cavities)	—	At the rear of the vehicle, left corner, underneath, on left frame rail	*Chassis Harness Routing*	*X410 Left Tail Lamp Jumper Harness to Chassis Harness*
X420	Right Tail Lamp Jumper to Chassis Harness (6 Cavities)	—	At the rear of the vehicle, right corner, underneath, on right frame rail	*Chassis Harness Routing*	*X420 Right Tail Lamp Jumper Harness to Chassis Harness*
X421	Antenna Jumper Harness COAX to Headliner Harness COAX (1 Cavity)	—	In the rear compartment right side, above the rear quarter glass, above the headliner	—	—
X423	Liftgate Jumper COAX to Headliner COAX	—	In the passenger compartment, In the headliner, near the liftgate	—	*X423 Liftgate COAX to Headliner COAX (-SWB)+DRZ*
X424	Liftgate Jumper Coax to Liftgate Coax	—	In the liftgate, behind the trim, near the top close to the high mount stop lamp	—	*X424 Liftgate Jumper Coax to Liftgate Coax (DRZ)*
X485	CHMSL Harness to Body Harness(2 Cavities)	—	In the rear compartment, at the rear, right of center, attached to the roof above the headliner	—	*X485 Center High Mounted Stop Lamp Jumper Harness to Body Harness*
X486	Body Harness to Rear Dome Lamp Jumper Harness (2 Cavities)	without SWB	In the rear compartment, at the rear, right side, at the top of the D-pillar, above the headliner	*Body Harness Routing - Right Rear of Passenger Compartment*	*X486 Body Harness to Headliner Harness*
X487	Body Harness to Rear HVAC Jumper Harness (14 Cavities)	—	In the rear compartment, right side, behind the quarter trim on rear HVAC unit	*Body Harness Routing - Right Rear of Passenger Compartment*	*X487 Body Harness to Auxiliary HVAC Jumper Harness*
X490	Body Harness to Body Harness (8 Cavities)	—	In the rear compartment, center, rear of vehicle, above the headliner	• *Body Harness Routing - Left Rear of Passenger Compartment* • *Body Harness Routing - Right Rear of Passenger Compartment*	*X490 Body Harness to Body Harness*

X495	Body Harness to Rear Bumper Harness (40 Cavities)	—	At the rear of the vehicle, at the right corner, behind the rear fascia	• *Rear Bumper Harness Routing (Z75)* • *Rear Bumper Harness Routing (X88 or Z88)* • *Body Harness Routing - Right Rear of Passenger Compartment*	*X495 Body Harness to Rear Fascia Harness*
X500	Driver Door Harness to Body Harness (41 Cavities)	—	In the passenger compartment, forward, left side, in the driver door jam, between door hinges	• *Driver Door Harness Routing* • *Body Harness Routing - Left Front of Passenger Compartment*	*X500 Driver Door Harness to Body Harness*
X505	Driver Door Harness to Driver Door Trim Harness (48 Cavities)	—	In the driver door, behind the driver door panel	*Driver Door Harness Routing*	*X505 Driver Door Harness to Driver Door Trim Harness*
X510	OSRVM Harness to Door Driver Harness (18 Cavities)	—	At the front of the driver door, behind driver door trim panel	*Driver Door Harness Routing*	*X510 Outside Rearview Mirror Harness to Driver Door Harness*
X515	Left OSRVM Camera Jumper to Door Driver Harness (7 Cavities)	UVH	At the front of the left front door, inside the Outside Rearview Mirror	—	*X515 Left Outside Rearview Mirror Camera Jumper Harness to Driver Door Harness*
X525	Driver OSRVM Harness to Driver OSRVM Glass Harness (6 Cavities)	—	At the front of the left front door, inside the Outside Rearview Mirror	—	—
X600	Passenger Door Harness to Body Harness (41 Cavities)	—	In the passenger compartment, forward, right side, in the passenger door jam, between door hinges	• *Body Harness Routing - Right Front of Passenger Compartment* • *Passenger Door Harness Routing*	*X600 Passenger Door Harness to Body Harness*
X605	Passenger Door Harness to Passenger Door Trim Harness (48 Cavities)	—	In the passenger door, behind the passenger door panel	*Passenger Door Harness Routing*	*X605 Passenger Door Harness to Passenger Door Trim Harness*
X610	OSRVM Harness to Door Passenger Harness (18 Cavities)	—	At the front of the passenger door, behind passenger door trim panel	—	*X610 Outside Rearview Mirror Harness to Passenger Door Harness*
X615	Right OSRVM Camera Jumper to Door Driver Harness (7 Cavities)	UVH	At the front of the right front door, inside the Outside Rearview Mirror	—	*X615 Outside Rearview Mirror Jumper Harness to Passenger Door Harness*
X625	Passenger OSRVM Harness to Passenger OSRVM Glass Harness (4 Cavities)	—	At the front of the left front door, inside the Outside Rearview Mirror	—	—
X700	Left Rear Door Harness to Body Harness (20 Cavities)	—	In the passenger compartment, behind the left B-pillar, near the middle	• *Left Rear Door Harness Routing* • *Body Harness Routing - Left Front of Passenger Compartment*	*X700 Left Rear Door Harness to Body Harness*
X705	Left Rear Door Harness to Left Rear Door Trim Harness (6 Cavities)	Z75	In the left rear door, behind the door panel	*Left Rear Door Harness Routing*	*X705 Left Rear Door Harness to Left Rear Door Trim Harness*
X800	Right Rear Door Harness to Body Harness (20 Cavities)	—	In the passenger compartment, behind the right B-pillar, near the middle	• *Right Rear Door Harness Routing* • *Body Harness Routing - Right Front of Passenger Compartment*	*X800 Right Rear Door Harness to Body Harness*
X805	Right Rear Door Harness to Right Rear Door Trim Harness (6 Cavities)	Z75	In the right rear door, behind the door panel	*Right Rear Door Harness Routing*	—

X900	Liftgate Harness to Body Harness (36 Cavities)	—	At the rear of the vehicle, at the top near center of the liftgate	• *Liftgate Harness Routing* • *Body Harness Routing - Right Rear of Passenger Compartment*	—
G100	Auxiliary Battery Negative Harness	L96 or L83 with 5W4 or 9C1	In the engine compartment, front left of center, on front of the engine block, rearward of the auxiliary battery	• *G100 (L83 with 5W4 or 9C1)* • *G100, G110 and G120 (L96)*	—
G101	Forward Lamp Harness	—	Behind front fascia, lower left of the radiator core support, forward of the left side frame mount to the core support	*G101*	—
G102	Forward Lamp Harness	—	Behind front fascia, lower right of the radiator core support, forward of the right side frame mount to the core support	*G102*	—
G103	Battery Negative Harness	—	In the engine compartment, right of center, on the right side frame rail, below battery	*G103 and G125 (L83 or L86)*	—
G110	Engine Harness	L83 or L86	In the engine compartment, on the left side of the engine block near the front, behind the water pump	• *G110 (L83 or L86)* • *G100, G110 and G120 (L96)*	—
G110	Engine Harness	L96	In the engine compartment, on the left side of the engine block, at the bottom near the front, behind the power steering pump	• *G110 (L83 or L86)* • *G100, G110 and G120 (L96)*	—
G120	Engine Harness	L96	In the engine compartment, on the right side of the engine block near the top, at the front	*G100, G110 and G120 (L96)*	—
G121	Chassis Harness	—	Under vehicle, outboard side of left frame rail, rearward side of the front body mount to chassis	*G121*	—
G125	Electric Power Steering Harness	L83 or L86	In the engine compartment, front right of center, on the front of the engine, above the A/C compressor	*G103 and G125 (L83 or L86)*	—
G130	Engine Harness	L83 or L86	In the engine compartment, rear left of center, on the engine, back side of left cylinder head	*G130 and G140 (L83 or L86)*	—
G140	Engine Harness	L83 or L86	In the engine compartment, rear right of center, on the engine, back side of right cylinder head	*G130 and G140 (L83 or L86)*	—
G141	Battery Negative Harness	L83 or L86	In the engine compartment, rear right of center, on the engine, back side of right cylinder head	*G141 (L83 or L86)*	—
G210	Instrument Panel Harness	—	In the passenger compartment, front right of center, top side of instrument panel, below trim, inboard of right A-Pillar	*G210*	—
G218	Instrument Panel Harness	—	In the passenger compartment, front left of center, top side of instrument panel, below trim, inboard of left A-Pillar	*G218*	—
G311	Body Harness	—	In the passenger compartment, left middle, base of left side B-Pillar	*G311 and G325*	—
G312	Body harness	—	In the passenger compartment, right middle, base of right side B-Pillar	*G312 and G327*	—
G325	Body Harness	—	In the passenger compartment, left middle, on floor below driver seat, near X310	*G311 and G325*	—

G327	Body Harness	—	In the passenger compartment, right middle, on floor below passenger seat, near X320	*G312 and G327*	—
G400	Chassis Harness	—	Under vehicle, inboard of left frame rail, top side of rear most cross member	*G400*	—
G402	Body Harness	—	In the luggage compartment, right rear, on right side D-Pillar, near bottom of quarter window	*G402*	—
J101	Front Bumper Harness	T3U	At front of vehicle, middle, approximately 16cm (6.25 inches) forward of the harness break-out for the right fog lamp.	—	—
J103	Front Bumper Harness	UGN with Z75	At front of vehicle, middle, approximately 18.5cm (7.25 inches) forward of the harness break-out for the right outer front object sensor.	—	—
J105	Front Bumper Harness	UD5	At front of vehicle, middle, approximately 8cm (3.5 inches) forward of the harness break-out for the right outer front object sensor.	—	—
J106	Front Bumper Harness	UGN with Z75	At front of vehicle, middle, approximately 14cm (5.5 inches) forward of the harness break-out for the front view camera.	*Forward Lamp Harness Routing - Left Engine Compartment*	—
J107	Front Bumper Harness	UD5	At front of vehicle, middle, approximately 12cm (4.75 inches) forward of the harness break-out for the right outer front object sensor.	—	—
J110	Left Headlamp Harness	—	At front of vehicle, left, within the headlamp assembly - left	—	—
J111	Forward Lamp Harness	UGN with Z75	In the engine compartment, front middle, approximately 4.5cm (1.75 inches) from break-out to inline X100	—	—
J114	Forward Lamp Harness	—	In the engine compartment, left front, bottom, approximately 9cm (3.5 inches) from break-out to G101	—	—
J115	Forward Lamp Harness	—	In the engine compartment, left front, in the breakout to X110 approximately 18cm (7 inches) from the main harness bundle	*Forward Lamp Harness Routing - Left Engine Compartment*	—
J116	Forward Lamp Harness	Z75	In the engine compartment, left front, approximately 20cm (7.75 inches) from break-out to X110	*Left Rear Door Harness Routing*	—
J117	Forward Lamp Harness	Z75	In the engine compartment, left front, approximately 15cm (5.75 inches) from break-out to X110	—	—
J118	Left Multifunction Lamp Harness	Z75	At front of vehicle, left, within the multifunction lamp assembly in the front fascia - left	—	—
J120	Right Headlamp Harness	—	At front of vehicle, right, within the headlamp assembly - right	—	—
J121	Auxiliary Battery Harness	5W4 or 9C1	In the engine compartment, left front	—	—
J123	Engine Harness	L96	In the engine compartment, on top of engine assembly, rear of center, approximately 5cm (2 inches) from break-out to B37B Engine Oil Pressure Sensor	*Engine Harness Routing - Left Rear (L96)*	—

J124	Engine Harness	L83 or L86	In the engine compartment, front left of center, approximately 13.5cm (5.25 inches) from break-out to G110	*Engine Harness Routing - Left Front (L83 or L86)*	—
J125	Forward Lamp Harness	—	In the engine compartment, front, right of middle, bottom, approximately 7.5cm (3 inches) from break-out to G102	*Forward Lamp Harness Routing - Right Engine Compartment*	—
J126	Engine Harness	L83 or L86	In the engine compartment, front left of center, near thermostat housing, approximately 15.5cm (6 inches) from break-out to X115,	*Engine Harness Routing - Left Front (L83 or L86)*	—
J126	Engine Harness	L96	In the engine compartment, front left of center, bottom left of the engine, in harness break-out to M64 Starter Motor, approximately 12cm (4.75 inches) rearward of the B34 Engine Coolant Temperature Sensor	*Engine Harness Routing - Left Front (L83 or L86)*	—
J127	Engine Harness	L83 or L86	In the engine compartment, front left of center, in harness break-out to ECM, approximately 17cm (6.5 inches) from main harness bundle	• *Engine Harness Routing - Left Front (L83 or L86)* • *Engine Harness Routing - Left Rear (L96)*	—
J127	Engine Harness	L96	In the engine compartment, front left of center	• *Engine Harness Routing - Left Front (L83 or L86)* • *Engine Harness Routing - Left Rear (L96)*	—
J128	Right Multifunction Lamp Harness	Z75	At front of vehicle, right, within the multifunction lamp assembly in the front fascia - right	—	—
J130	Forward Lamp Harness	—	In the engine compartment, left front, bottom, approximately 5cm (2 inches) from break-out to the left impact sensor	*Forward Lamp Harness Routing - Left Engine Compartment*	—
J148	Engine Harness	L96	In the engine compartment, middle left of center, top and back of engine assembly , approximately 16cm (6.25 inches) from the main harness on the breakout to B37B Engine Oil Pressure Sensor	—	—
J149	Engine Harness	L96	In the engine compartment, middle left of center, top of engine assembly , approximately 12.5cm (5 inches) rearward of break-out to B74 Manifold Absolute Pressure Sensor	—	—
J150	Engine Harness	K59	In the engine compartment, front left of center, bottom near power steering pump, approximately 14cm (5.50 inches) from break-out to the left knock sensor	*Engine Harness Routing - Left Front (L83 or L86)*	—
J151	Engine Harness	K59	In the engine compartment, front left of center, bottom near power steering pump, approximately 6cm (2.25 inches) from break-out to the left knock sensor	*Engine Harness Routing - Left Front (L83 or L86)*	—
J152	Engine Harness	K59	In the engine compartment, middle left of center, near top, approximately 5cm (2 inches) forward of break-out to ignition coil number 1	*Engine Harness Routing - Left Front (L83 or L86)*	—
J153	Engine Harness	K59	In the engine compartment, middle left of center, near top, approximately 3cm (1 inch) rearward of break-out to ignition coil number 1	*Engine Harness Routing - Left Front (L83 or L86)*	—

J160	Ignition Coil (Odd) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X170	—	—
J161	Engine Harness	L83 or L86	In the engine compartment, middle left of center, near top, approximately 7cm (2.75 inches) rearward of break-out to ignition coil number 1	• *Engine Harness Routing - Right Rear (L83 or L86)* • *Engine Harness Routing - Left Front (L83 or L86)*	—
J161	Ignition Coil (Odd) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X170	• *Engine Harness Routing - Right Rear (L83 or L86)* • *Engine Harness Routing - Left Front (L83 or L86)*	—
J162	Engine Harness	L83 or L86	In the engine compartment, middle right of center, near top, approximately 5cm (2 inches) foreward of break-out to ignition coil number 4	—	—
J162	Ignition Coil (Even) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X171	—	—
J163	Engine Harness	L83 or L86	In the engine compartment, front left of center, near top, approximately 10.5cm (4 inches) from break-out to engine oil pressure sensor	*Engine Harness Routing - Left Front (L83 or L86)*	—
J164	Ignition Coil (Even) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X171	—	—
J165	Engine Harness	L83 or L86	In the engine compartment, rear left of center, on break-out to X115, approximately 12cm (4.75 inches) from main harness bundle	• *Engine Harness Routing - Left Rear (L96)* • *Engine Harness Routing - Left Front (L83 or L86)*	—
J165	Engine Harness	L96	In the engine compartment, rear left of center, left side of engine, approximately 7cm (2.75 inches) from break-out to X115	• *Engine Harness Routing - Left Rear (L96)* • *Engine Harness Routing - Left Front (L83 or L86)*	—
J166	Engine Harness	L83 or L86	In the engine compartment, rear center, top, approximately 19cm (7.5 inches) left of break-out to G140	—	—
J166	Ignition Coil (Odd) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X170	—	—
J167	Ignition Coil (Even) Harness	L96	In the engine compartment, middle left of center, on top of the engine assembly, approximately 5cm (2 inches) from break-out to X171	—	—
J175	Transmission 8-Speed	M5U	Internal to transmission	—	—
J176	Transmission 8-Speed	M5U	Internal to transmission	—	—
J177	Transmission 8-Speed	M5U	Internal to transmission	—	—
J178	Engine Harness	M5U	In the engine compartment, rear center, top, approximately 18cm (7 inches) from break-out to X160	—	—

J179	Engine Harness	M5U	In the engine compartment, rear center, top, approximately 14.5cm (5.75 inches) from break-out to X160	—	—
J191	Chassis Harness	—	Underside of the vehicle, left frame rail, approximately 35.5cm (14 inches) rearward of break-out for G121	*Chassis Harness Routing*	—
J192	Chassis Harness	BRS	Underside of the vehicle, left frame rail, approximately 30.5cm (12 inches) rearward of break-out for G121	*Chassis Harness Routing*	—
J200	Instrument Panel Harness	—	In the instrument panel, left of center, behind cluster, approximately 2cm (1 inches) from break-out to G218	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J201	Instrument Panel Harness	—	In the instrument panel, left of center, behind cluster, approximately 2cm (1 inches) from break-out to G218	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J203	Instrument Panel Harness	—	In the instrument panel, center, approximately 6cm (2.5 inches) from break-out to the radio	—	—
J205	Instrument Panel Harness	—	In the instrument panel, left of center, behind cluster, approximately 4cm (1.5 inches) from break-out to G218	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J207	Brake/Clutch Harness	NP0 or NQH	Underside of instrument panel, left side, approximately 44cm (17.25 inches) from break-out to transfer case control module	—	—
J208	Instrument Panel Harness	—	In the instrument panel, left side, on a break-out to the BCM, approximately 14cm (5.5 inches) from main harness bundle	• *Instrument Panel Harness Routing - Rear of Instrument Panel* • *Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J210	Instrument Panel Harness	—	In the instrument panel, left side, approximately 2.5cm (1 inch) from breakout to BCM	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J211	Instrument Panel Harness	—	In the instrument panel, left of center, behind cluster, approximately 7cm (2.75 inches) from break-out to G218	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J212	Instrument Panel Harness	Z75	In the instrument panel, left of center, behind cluster, approximately 12cm (4.75 inches) from breakout to X300	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J215	Instrument Panel Harness	X88 or Z88	In the instrument panel, center, approximately 7cm (2.8 inches) from break-out to the info display module	—	—
J220	Instrument Panel Harness	—	In the instrument panel, center, approximately 5cm (2 inches) from break-out to the media disc player	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J241	Instrument Panel Harness	—	In the instrument panel, left side, on a break-out to X225, in a formed conduit, approximately 20cm (8 inches) from X225	—	—
J242	Instrument Panel Harness	—	In the instrument panel, right side, behind glove box, approximately 5cm (2 inches) from break-out to the right instrument panel fuse block	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—

J249	Instrument Panel Harness	—	In the instrument panel, center, approximately 12cm (4.75 inches) from break-out to the radio	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J250	Instrument Panel Harness	IO5 or IO6 or TG5	In the instrument panel, center, approximately 20cm (7.75 inches) from break-out to the right instrument panel fuse block	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J251	Instrument Panel Harness	—	In the instrument panel, center, approximately 6cm (2.5 inches) from break-out to the radio	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J255	HVAC Harness	—	In the front of the passenger compartment, near center, approximately 4cm (1.5 inches) from breakout to G210	*HVAC Assembly Harness Routing*	—
J257	HVAC Harness	—	In the front of the passenger compartment, near center, approximately 23.5cm (9.25 inches) from breakout to X215	*HVAC Assembly Harness Routing*	—
J258	HVAC Harness	—	In the front of the passenger compartment, near center, approximately 6.5cm (2.5 inches) from breakout to air temerature door actuator - right	*HVAC Assembly Harness Routing*	—
J259	HVAC Harness	—	In the front of the passenger compartment, near center, approximately 23.5cm (9.25 inches) from breakout to X215	—	—
J260	Instrument Panel Harness	IO5 or IO6 with UE1, UEU, UFL, or UHX	In the instrument panel, center, approximately 13cm (5 inches) from break-out to the radio	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J279	Steering Column Harness	—	In the front of the passenger compartment, left of center, along steering column	—	—
J284	Steering Column Harness	—	In the front of the passenger compartment, left of center, along steering column	—	—
J285	Steering Column Harness	—	In the front of the passenger compartment, left of center, in steering wheel, between S70L and break-out to X85	*Steering Wheel Harness Routing*	—
J286	Steering Column Harness	UVD	In the front of the passenger compartment, left of center, in steering wheel, between S70R and break-out to X85	—	—
J289	Body Harness	—	In the passenger compartment, front, left of center, behind instrument panel, inside a formed conduit, approximately 6cm (2.25 inches) from the break-out to the instrument panel junction block	*Body Harness Routing - Left Front of Passenger Compartment*	—
J294	Instrument Panel Harness	—	In the instrument panel, left side, between break-out for the BCM and break-out for X399	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
J295	Steering Column Harness	—	In the front of the passenger compartment, left of center, in steering wheel, between S70R and break-out to X85	*Steering Wheel Harness Routing*	—
J301	Overhead Console Harness	—	In the passenger compartment, overhead, front and center, on break-out to right overhead console reading lamp, approximately 3cm (1.25 inches) from main harness bundle	*Overhead Console Harness Routing*	—
J302	Overhead Console Harness	—	In the passenger compartment, overhead, front and center, approximately 3.5cm (1.25 inches) from break-out to floor console flood lamp	*Overhead Console Harness Routing*	—

J303	Overhead Console Harness	—	In the passenger compartment, overhead, front and center, approximately 8.5cm (3.5 inches) from break-out to right overhead console reading lamp	*Overhead Console Harness Routing*	—
J304	Body Harness	Z75	In the passenger compartment, front, left side, behind instrument panel, approximately 4cm (1.5 inches) from the break-out to X225	*Body Harness Routing - Left Front of Passenger Compartment*	—
J305	Passenger Seat Harness	ULT	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion	—	—
J306	Body Harness	—	In the passenger compartment, forward of middle, just left of center, between driver and passenger seat, in a formed conduit, approximately 27.5cm (10.75 inches) from the break-out to the inflatable restraint sensing and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J307	Body Harness	DL3 or DR4	In the passenger compartment, front, left side, along A-pillar, in the break-out to X500, in a formed conduit, approximately 20cm (7.75 inches) from the main harness bundle	*Body Harness Routing - Left Front of Passenger Compartment*	—
J308	Body Harness	—	In the passenger compartment, front, left side, along A-pillar, in the break-out to the left instrument panel fuse block, approximately 4cm (1.5 inches) from the main harness bundle	*Body Harness Routing - Left Front of Passenger Compartment*	—
J309	Body Harness	JL1, NP0 or NQH	In the passenger compartment, front, left side, behind instrument panel, approximately 6cm (2.25 inches) from the break-out for the Park Brake Switch	*Body Harness Routing - Left Front of Passenger Compartment*	—
J310	Body Harness	UTT	In the passenger compartment, front, left side, along A-pillar, forward of driver door sill, approximately 5cm (2 inches) from the break-out to left instrument panel fuse block	*Body Harness Routing - Left Front of Passenger Compartment*	—
J311	Headliner Harness	—	In the passenger compartment, overhead, front and to the left, approximately 14cm (5.5 inches) fromt the break-out to X316	*Headliner Harness Routing*	—
J312	Headliner Harness	—	In the passenger compartment, overhead, front and to the left, approximately 45cm (17.75 inches) fromt the break-out to X316	*Headliner Harness Routing*	—
J313	Driver Seat Harness	—	In the passenger compartment, forward of middle, left of center, within the driver seat cusion, between the break-out to sear front vertical motor and break-out to seat belt switch	• *Driver Seat Harness Routing* • *Headliner Harness Routing*	—
J314	Driver Seat Harness	—	In the passenger compartment, forward of middle, left of center, within the driver seat cusion, between the break-out to sear front vertical motor and break-out to seat belt switch	*Driver Seat Harness Routing*	—
J315	Driver Seat Harness	—	In the passenger compartment, forward of middle, left of center, within the driver seat cusion, between the break-out to sear front vertical motor and break-out to seat rear vertical motor	*Driver Seat Harness Routing*	—

J316	Driver Seat Harness	KB6	In the passenger compartment, forward of middle, left of center, within the driver seat cusion, between X310 and break-out to seat rear vertical motor	*Driver Seat Harness Routing*	—
J317	Driver Seat Harness	KB6	In the passenger compartment, forward of middle, left of center, within the driver seat cusion, between X310 and break-out to seat rear vertical motor	*Driver Seat Harness Routing*	—
J318	Driver Seat Harness	KB6	In the passenger compartment, forward of middle, left of center, within the driver seat back	—	—
J319	Headliner Harness	DNU or U42	In the passenger compartment, overhead, front and to the left, approximately 56cm (22 inches) fromt the break-out to X203	*Headliner Harness Routing*	—
J320	Headliner Harness	AZ3	In the passenger compartment, overhead, front and to the left, approximately 38cm (15 inches) fromt the break-out to X316	*Headliner Harness Routing*	—
J321	Passenger Seat Harness	KB6	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion, between break-out for passenger blower assembly and the seat adjuster switch	—	—
J322	Body Harness	without SWB or Z75	In the passenger compartment, forward of middle, just right of center, between driver and passenger seat, in a formed conduit, approximately 20.5cm (8 inches) from the break-out to G327	*Body Harness Routing - Right Front of Passenger Compartment*	—
J323	Passenger Seat Harness	AN3, A95, KA1 or KB6	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion, between break-out for passenger seat back connector and break-out for passenger presence module	—	—
J325	Headliner Harness	—	In the passenger compartment, overhead, front and to the left, approximately 20.5cm (8 inches) fromt the break-out to X316	—	—
J326	Passenger Seat Harness	KB6	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion, between break-out for cusion heating element and break-out for the lumbar switch.	—	—
J327	Passenger Seat Harness	KB6	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion, between break-out for passenger seat back connector and break-out for passenger presence module	—	—
J328	Passenger Seat Harness	KB6	In the passenger compartment, forward of middle, right of center, within the passenger seat back	—	—
J329	Passenger Seat Harness	ULT	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion	—	—
J330	Body Harness	BTM or UGN	In the passenger compartment, forward of middle, left side, under the driver seat, near the driver door sill, in a formed conduit, approximately 9cm (3.5 inches) from the break-out for G325	*Body Harness Routing - Left Front of Passenger Compartment*	—

J331	Body Harness	—	In the passenger compartment, forward of middle, left side, under the driver seat, near the driver door sill, in a formed conduit, approximately 9cm (3.5 inches) from the break-out for G325	*Body Harness Routing - Left Front of Passenger Compartment*	—
J332	Headliner Harness	—	In the passenger compartment, overhead, front and to the left, approximately 51.5cm (20.25 inches) fromt the break-out to X316	*Headliner Harness Routing*	—
J333	Overhead Console Harness	—	In the passenger compartment, overhead, front and center, on break-out to passenger disabled indicator, approximately 5cm (2 inches) from main harness bundle	*Overhead Console Harness Routing*	—
J334	Body Harness	UGN with Z75	In the passenger compartment, forward of middle, left side, under the driver seat, in a formed conduit, approximately 14cm (5.5 inches) from the break-out for G325	*Body Harness Routing - Left Front of Passenger Compartment*	—
J335	Driver Seat Harness	ULT	In the passenger compartment, forward of middle, left of center, within the driver seat back	—	—
J338	Driver Seat Harness	ULT	In the passenger compartment, forward of middle, left of center, within the driver seat cusion	—	—
J339	Floor Console Harness	D07 with DCK or K4C	In passenger compartment, forward of middle, between the driver and passenger seat, in floor console, approximately 17cm (6.75 inches) from the break-out to the accessory power receptacle for the floor console storage bin	• *Floor Console Harness Routing - Top (X88 or Z88)* • *Floor Console Harness Routing - Bottom Front (Z75)*	—
J340	Body Harness	UVH	In the passenger compartment, near middle, left side, at the base of the B-pillar, in a formed conduit, approximately 7cm (2.75 inches) from the break-out to X700	—	—
J342	Body Harness	UQA	In the passenger compartment, rear of middle, left side, approximately 39cm (15.25 inches) from the break-out for the right rear glass breakage sensor	—	—
J343	Body Harness	UQA	In the passenger compartment, rear of middle, left side, approximately 22.5cm (8.75 inches) from the break-out for the right rear glass breakage sensor	—	—
J346	Body Harness	UQA	In the passenger compartment, rear of middle, left side, approximately 43cm (16.75 inches) from the break-out for the right rear glass breakage sensor	—	—
J347	Body Harness	UQA	In the passenger compartment, rear of middle, right side, approximately 15cm (6 inches) from the break-out to X800	—	—
J348	Passenger Seat Harness	ULT	In the passenger compartment, forward of middle, right of center, within the passenger seat cusion	—	—
J350	Body Harness	—	In the passenger compartment, forward of middle, just right of center, between driver and passenger seat, in a formed conduit, approximately 35cm (13.75 inches) from the break-out to G327	*Body Harness Routing - Left Front of Passenger Compartment*	—

J351	Body Harness	BTM	In the passenger compartment, near middle, left side, near base of B-Pillar, approximately 20cm (7.75 inches) from the break-out to the driver side seat retractor	*Body Harness Routing - Left Middle of Passenger Compartment*	—
J352	Body Harness	ATN or ATT	In the passenger compartment, near middle, left side, along left rear door sill, in a formed conduit, approximately 15cm (6 inches) from the break-out to X308	*Body Harness Routing - Left Middle of Passenger Compartment*	—
J353	Body Harness	—	In the passenger compartment, near middle, left side, at the base of the B-pillar, in a formed conduit, approximately 7cm (2.75 inches) from the break-out to X700	*Body Harness Routing - Left Front of Passenger Compartment*	—
J354	Body Harness	—	In the passenger compartment, near rear, left side, at base of C-pillar, approximately 25cm (10 inches) from the break-out to the left rear side impact sensor	*Body Harness Routing - Left Middle of Passenger Compartment*	—
J355	Chassis Harness	—	Underside of the vehicle, left frame rail, on main harness bundle, approximately 45cm (17.75 inches) rearward of break-out for the brake control module	*Chassis Harness Routing*	—
J356	Chassis Harness	—	Underside of the vehicle, left frame rail, on main harness bundle, approximately 15cm (6 inches) rearward of break-out for the brake control module	*Chassis Harness Routing*	—
J357	Second Row Seat Left Harness	ATN or ATT with KA6	In the passenger compartment, near middle, left side, in the second row left seat, approximately 20.5cm (8 inches) from X308	*Second Row Seat Harness Routing*	—
J358	Body Harness	5W4 or 9C1	In the passenger compartment, near middle, left side, near B-pillar, approximately 8.5cm (3.5 inches) from the break-out to G325	—	—
J360	Body Harness	—	In the passenger compartment, forward of middle, right side, along passenger door sill, in a formed conduit, approximately 35.5cm (14 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J361	Body Harness	—	In the passenger compartment, forward of middle, left of center, between driver and passenger seat, in a formed conduit, approximately 18cm (7 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J362	Body Harness	AZ3, AX7, ATN, ATT, KA6 or Z75	In the passenger compartment, forward of middle, right side, along the driver door sill, just forward of the B-pillar, in a formed conduit, approximately 12cm (4.5 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J363	Body Harness	—	In the passenger compartment, forward of middle, right side, along the driver door sill, in a formed conduit, approximately 44cm (17 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J364	Body Harness	Z75	In the passenger compartment, forward of middle, right side, under the passenger seat, in a formed conduit, approximately 7cm (2.75 inches) from the break-out to G327	*Body Harness Routing - Right Front of Passenger Compartment*	—

J365	Body Harness	—	In the passenger compartment, front, right side, along passenger door sill, in a formed conduit, approximately 47.5cm (18.75 inches) from the break-out to X275	*Body Harness Routing - Right Front of Passenger Compartment*	—
J366	Second Row Seat Right Harness	ATN or ATT with KA6	In the passenger compartment, near middle, left side, in the second row right seat, approximately 23cm (9 inches) from X378	*Second Row Seat Harness Routing*	—
J367	Body Harness	DL3 or DR4	In the passenger compartment, front, right side, along passenger door sill, in a formed conduit, approximately 41.5cm (16.5 inches) from the break-out to X275	*Body Harness Routing - Right Front of Passenger Compartment*	—
J368	Body Harness	—	In the passenger compartment, front, right side, along passenger door sill, in a formed conduit, approximately 52.5cm (20.75 inches) from the break-out to X275	*Body Harness Routing - Right Front of Passenger Compartment*	—
J369	Body Harness	—	In the passenger compartment, front, right side, along passenger door sill, in a formed conduit, approximately 57.5cm (22.5 inches) from the break-out to X275	*Body Harness Routing - Right Front of Passenger Compartment*	—
J370	Body Harness	KA1, KA6 or UTT	In the passenger compartment, front, right side, along passenger door sill, in a formed conduit, approximately 30cm (11.75 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J371	Body Harness	—	In the passenger compartment, forward of middle, right side, under the passenger seat, in a formed conduit, approximately 16cm (6.5 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J372	Body Harness	A45	In the passenger compartment, forward of middle, right side, under the passenger seat, in a formed conduit, approximately 12cm (4.75 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J373	Body Harness	UTT	In the passenger compartment, forward of middle, right side, under the passenger seat, in a formed conduit, approximately 3cm (1.25 inches) from the break-out to G312	*Body Harness Routing - Right Front of Passenger Compartment*	—
J374	Chassis Harness	5W4 or 9C1	In the passenger compartment, forward of middle, just right of center, between driver and passenger seat, in a formed conduit, approximately 47cm (17 inches) from the break-out to G327	—	—
J375	Chassis Harness	—	Underside of the vehicle, left frame rail, on main harness bundle, approximately 8cm (3 inches) forward of break-out for X351	*Chassis Harness Routing*	—
J376	Chassis Harness	5W4 or 9C1	In the passenger compartment, forward of middle, just right of center, between driver and passenger seat, in a formed conduit, approximately 41cm (16 inches) from the break-out to G327	—	—
J379	Body Harness	DL3, DL8 or DR4	In the passenger compartment, forward of middle, just left of center, between the driver and passenger seat, in a formed conduit, approximately 43cm (17 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—

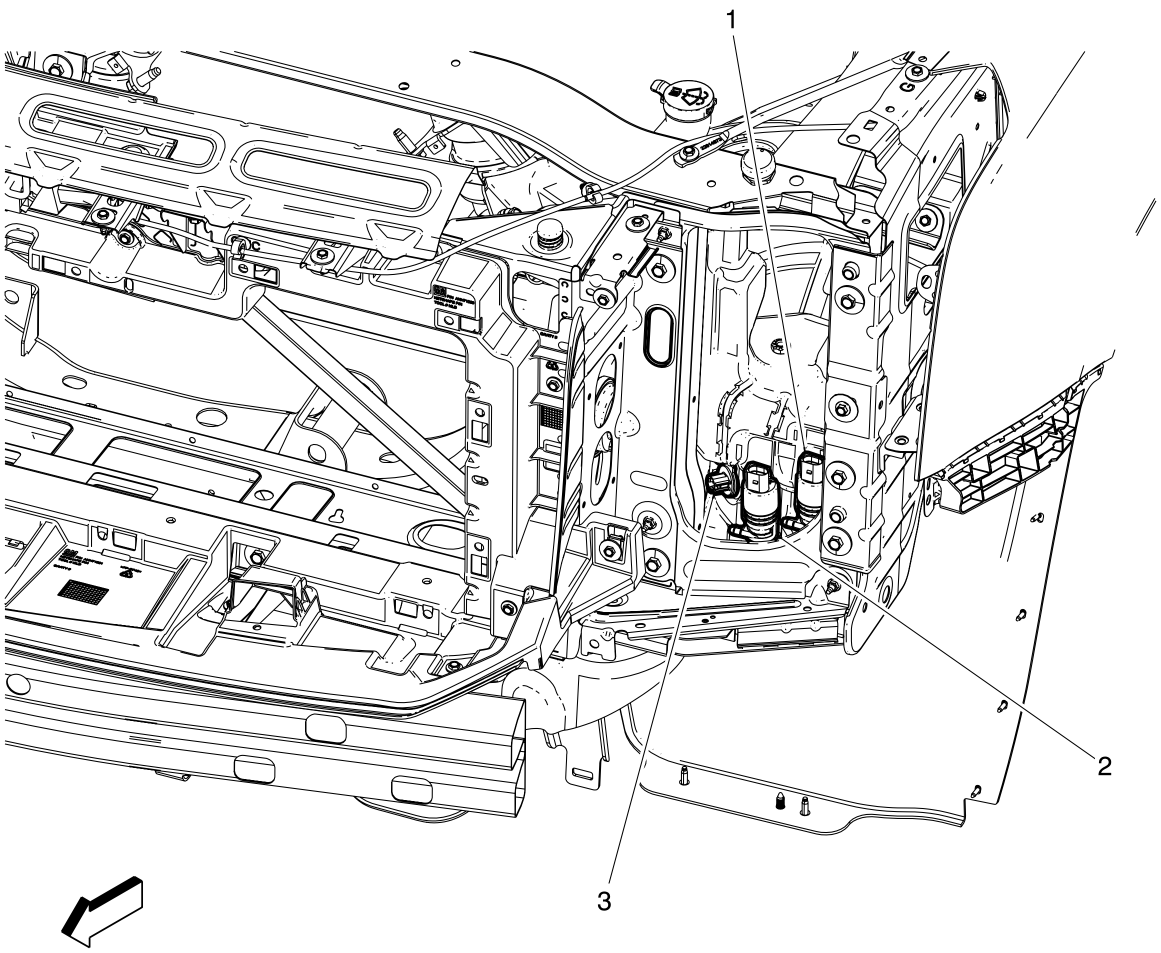
J381	Body Harness	UTT	In the passenger compartment, rear, left side, approximately 10cm (4 inches) from the break-out to the rear fuse block	—	—
J382	Body Harness	BRS, DL3, DR4 or HD7	In the passenger compartment, forward of middle, just left of center, between the driver and passenger seat, in a formed conduit, approximately 23.5cm (9.25 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J383	Body Harness	—	In the passenger compartment, forward of middle, just left of center, between the driver and passenger seat, in a formed conduit, approximately 32cm (12 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J384	Body Harness	—	In the passenger compartment, forward of middle, just right of center, between the driver and passenger seat, in a formed conduit, approximately 54cm (21 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J385	Body Harness	ULT	In the passenger compartment, forward of middle, center, between the driver and passenger seat, in a formed conduit, approximately 11cm (4.5 inches) from the break-out to the multi-axis acceleration sensor	*Body Harness Routing - Left Front of Passenger Compartment*	—
J386	Body Harness	—	In the passenger compartment, forward of middle, just left of center, between the driver and passenger seat, in a formed conduit, approximately 32.5cm (12.75 inches) from the break-out to the inflatable restraint and diagnostic module	*Body Harness Routing - Left Front of Passenger Compartment*	—
J387	Accessory Power Harness	AYE	In the passenger compartment, in the floor console, left side under the instrument panel, approximately 11cm (4.5 inches) from KR103 DVD Relay	—	—
J401	Body Harness	ATN or ATT	In the rear compartment, rear, right side, along the D-pillar, approximately 6cm (2.5 inches) from the break-out to the right rear accessory power receptacle	*Body Harness Routing - Right Rear of Passenger Compartment*	—
J402	Body Harness	—	In the rear compartment, rear, right side, just forward of the D-pillar, approximately 16cm (6.5 inches) from the break-out to the right glass breakage sensor	*Body Harness Routing - Right Rear of Passenger Compartment*	—
J403	Body Harness	K59, TC2, UEU, UFL UHX, UGN or UKC	In the rear compartment, rear, right side, along the D-pillar, approximately 8cm (3 inches) from the break-out to the right rear accessory power receptacle	*Body Harness Routing - Right Rear of Passenger Compartment*	—
J404	Body Harness	ATT or ATN	In the rear compartment, rear, right side, along the D-pillar, on the break-out to X495, approximately 6cm (2.5 inches) from the main harness bundle	*Body Harness Routing - Right Rear of Passenger Compartment*	—
J410	Left Tail Lamp Harness	Z75	At rear of vehicle, left, within the tail lamp assembly - left	—	—

J420	Right Tail Lamp Harness	Z75	At rear of vehicle, right, within the tail lamp assembly - right	—	—
J449	Chassis Harness	JL1 or Z85	Underside of the vehicle, left frame rail, at rear of vehicle, approximately 20cm (7.75 inches) forward of break-out for the left rear speed sensor	*Chassis Harness Routing*	—
J450	Chassis Harness	—	Underside of the vehicle, left frame rail, at rear of vehicle, approximately 17cm (6.75 inches) rearward of break-out for the fuel pump driver control module	—	—
J451	Chassis Harness	BRS, JL1, Z85 or Z95	Underside of the vehicle, left frame rail, at rear of vehicle, approximately 14cm (5.50 inches) forward of break-out for the left rear speed sensor	*Chassis Harness Routing*	—
J453	Chassis Harness	—	Underside of the vehicle, left frame rail, at rear of vehicle, approximately 7cm (3 inches) rearward of break-out for the fuel pump driver control module	*Chassis Harness Routing*	—
J455	HVAC Rear Harness	D07	In the passenger compartment, forward of middle, near center, between driver and passenger seat, in the rear HVAC harness	—	—
J460	Body Harness	ATN or ATT	In the rear compartment, rear, left side, below rear quarter glass, approximately 42cm (16.75 inches) from the break-out to the glass breakage sensor	*Body Harness Routing - Left Rear of Passenger Compartment*	—
J461	Body Harness	UQS	In the rear compartment, rear, left side, below rear quarter glass, approximately 15cm (6 inches) from the break-out to the glass breakage sensor	*Body Harness Routing - Left Rear of Passenger Compartment*	—
J462	Body Harness	UQS	In the rear compartment, rear, left side, below rear quarter glass, approximately 6cm (2.25 inches) from the break-out to the glass breakage sensor	*Body Harness Routing - Left Rear of Passenger Compartment*	—
J490	Rear Bumper Harness	UD5 or UD7	At rear of vehicle, right side, approximately 3.5cm (1.5 inches) from the break-out to the right side object sensor module	• *Rear Bumper Harness Routing (X88 or Z88)* • *Rear Bumper Harness Routing (Z75)*	—
J492	Rear Bumper Harness	UKC or TC2	At rear of vehicle, right side, approximately 12cm (5 inches) from the break-out to the left middle rear object sensor	—	—
J493	Rear Bumper Harness	T79	At rear of vehicle, right side, approximately 26.5cm (10.25 inches) from the break-out to the right middle rear object sensor	• *Rear Bumper Harness Routing (X88 or Z88)* • *Rear Bumper Harness Routing (Z75)*	—
J494	Rear Bumper Harness	Z75 with UGN	At rear of vehicle, right side, approximately 4.5cm (2 inches) from the break-out to the right outer rear object sensor	*Rear Bumper Harness Routing (Z75)*	—
J495	Rear Bumper Harness	UD5 or UD7	At rear of vehicle, right side, approximately 6.5cm (2.5 inches) from the break-out to the right outer rear object sensor	• *Rear Bumper Harness Routing (X88 or Z88)* • *Rear Bumper Harness Routing (Z75)*	—

J498	Rear Bumper Harness	UKC	At rear of vehicle, right side, approximately 12.5cm (5 inches) from the break-out to the right middle rear object sensor	• *Rear Bumper Harness Routing (Z75)* • *Rear Bumper Harness Routing (X88 or Z88)*	—
J499	Rear Bumper Harness	T79, UKC or UGN with Z75	At rear of vehicle, right side, approximately 15cm (6 inches) from the break-out to the right outer rear object sensor	• *Rear Bumper Harness Routing (Z75)* • *Rear Bumper Harness Routing (X88 or Z88)*	—
J511	Driver Door Harness	HD7	In the driver door, near front, approximately 12.5cm (5 inches) from the break-out to X505	—	—
J515	Driver Door Harness	—	In the driver door, near front, approximately 5cm (2 inches) from the break-out to X505	*Driver Door Harness Routing*	—
J516	Driver Door Trim Harness	—	In the driver door, near front, approximately 6cm (2.5 inches) from the break-out to the outside rearview mirror switch	*Driver Door Harness Routing*	—
J517	Left Outside Rearview Mirror Harness	DL3, DR4 or UKC	On outside of driver door, front middle, forward of window opening	—	—
J519	Driver Door Trim Harness	—	In the driver door, near middle, approximately 1.5cm (0.5 inches) from the break-out to the outside rearview mirror switch	*Driver Door Harness Routing*	—
J520	Driver Door Trim Harness	Z75	In the driver door, near middle, approximately 7cm (3 inches) from the break-out to the driver door accent lamp	*Driver Door Harness Routing*	—
J550	Driver Door Harness	—	In the driver door, near front, approximately 17cm (6.75 inches) from the break-out to the driver window motor	—	—
J611	Passenger Door Harness	HD7	In the passenger door, near front, approximately 12cm (5 inches) from the break-out to X605	*Passenger Door Harness Routing*	—
J615	Passenger Door Harness	—	In the passenger door, near front, approximately 5cm (2 inches) from the break-out to X605	*Passenger Door Harness Routing*	—
J616	Passenger Door Trim Harness	—	In the passenger door, near front, approximately 16.5cm (6.5 inches) from the break-out to the passenger window switch	*Passenger Door Harness Routing*	—
J617	Right Outside Rearview Mirror Harness	DL3, DR4 or UKC	On outside of passenger door, front middle, forward of window opening	—	—
J620	Passenger Door Trim Harness	Z75	In the passenger door, near front, approximately 12cm (4.5 inches) from the break-out to the passenger window switch	*Passenger Door Harness Routing*	—
J710	Left Rear Door Harness	UQH	In the left rear door, near front, approximately 10cm (4 inches) from the break-out to the left rear window switch	*Left Rear Door Harness Routing*	—
J711	Left Rear Door Harness	UQH	In the left rear door, near front, approximately 18cm (7.25 inches) from the break-out to the left rear door speaker	*Left Rear Door Harness Routing*	—
J715	Left Rear Door Harness	—	In the left rear door, near front, approximately 3.5cm (1.25 inches) from the break-out to the left rear window switch	*Left Rear Door Harness Routing*	—

J716	Left Rear Door Trim Harness	Z75	In the left rear door, near middle, approximately 3cm (1.25 inches) from the break-out to the left rear door pocket flood lamp	—	—
J720	Left Rear Door Trim Harness	Z75	In the left rear door, near middle, approximately 7cm (2.75 inches) from the break-out to the left rear door pocket flood lamp	*Left Rear Door Harness Routing*	—
J810	Right Rear Door Harness	UQH	In the right rear door, near front, approximately 10cm (4 inches) from the break-out to the right rear window switch	*Right Rear Door Harness Routing*	—
J811	Right Rear Door Harness	UQH	In the right rear door, near front, approximately 18cm (7.25 inches) from the break-out to the right rear door speaker	*Right Rear Door Harness Routing*	—
J815	Right Rear Door Harness	—	In the right rear door, near front, approximately 3.5cm (1.25 inches) from the break-out to the right rear window switch	*Right Rear Door Harness Routing*	—
J816	Right Rear Door Trim Harness	Z75	In the right rear door, near middle, approximately 3cm (1.25 inches) from the break-out to the right rear door pocket flood lamp	*Right Rear Door Harness Routing*	—
J820	Right Rear Door Trim Harness	Z75	In the right rear door, near middle, approximately 7cm (2.75 inches) from the break-out to the right rear door pocket flood lamp	*Right Rear Door Harness Routing*	—
J901	Liftgate Harness	—	In the liftgate, top, right side, in the harness break-out to the defogger grid, approximately 34cm (13.25 Inches) from the defogger grid connector	*Liftgate Harness Routing*	—
J902	Liftgate Harness	—	In the liftgate, top, left side, approximately 5cm (2 Inches) from the break-out to the defogger grid connector	*Liftgate Harness Routing*	—
J903	Liftgate Harness	TB5 or TC2	In the liftgate, near center, just left of center, approximately 10cm (4 Inches) from the break-out to the liftgate latch assembly	*Liftgate Harness Routing*	—
J904	Liftgate Harness	—	In the liftgate, near center of tailgate, approximately 10cm (4 Inches) from the break-out to the right license plate lamp	*Liftgate Harness Routing*	—
JX200	Splice Pack – Instrument Panel	—	In the passenger compartment, at the rear of the instrument panel, left side at the Body Control Module	*Instrument Panel Harness Routing - Rear of Instrument Panel*	—
JX300	Splice Pack – Body	UD5	In the passenger compartment, right side, in passenger footwell, behind kick panel trim near X275	*Body Harness Routing - Right Front of Passenger Compartment*	—

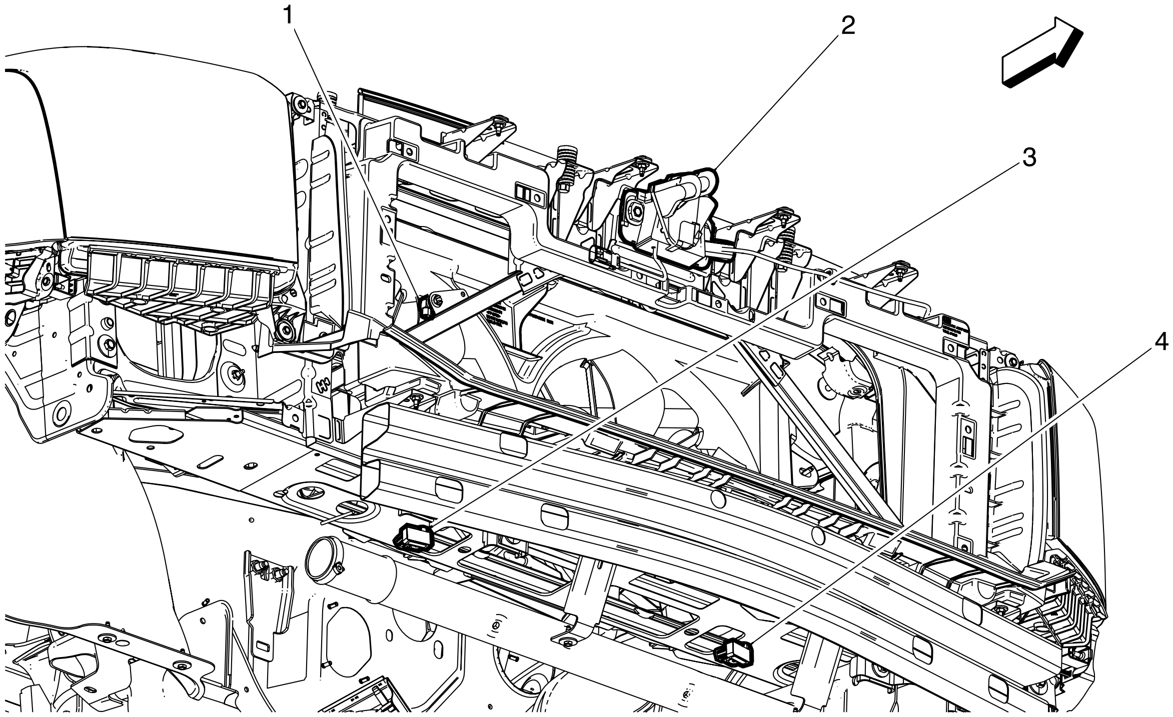
Left Front Corner of Vehicle Components



Items

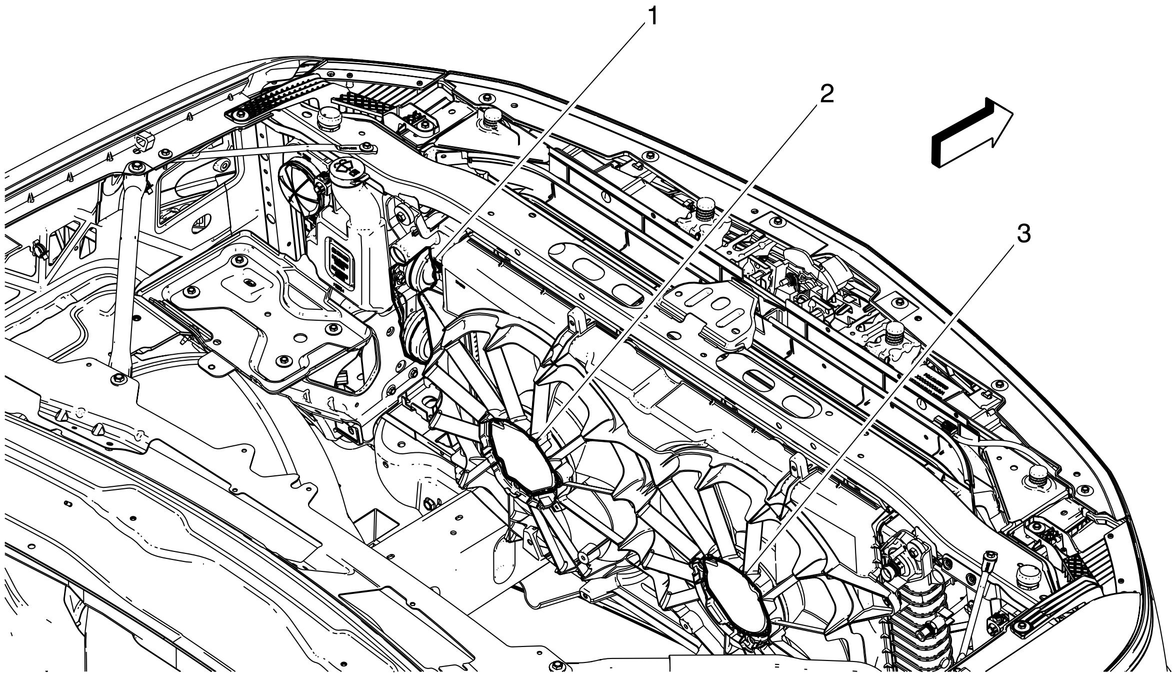
1. G19 Rear Window Washer Pump
2. G24 Windshield Washer Pump
3. B118B Windshield Washer Fluid Level Switch

Behind Front Fascia Components (Z75)



Items

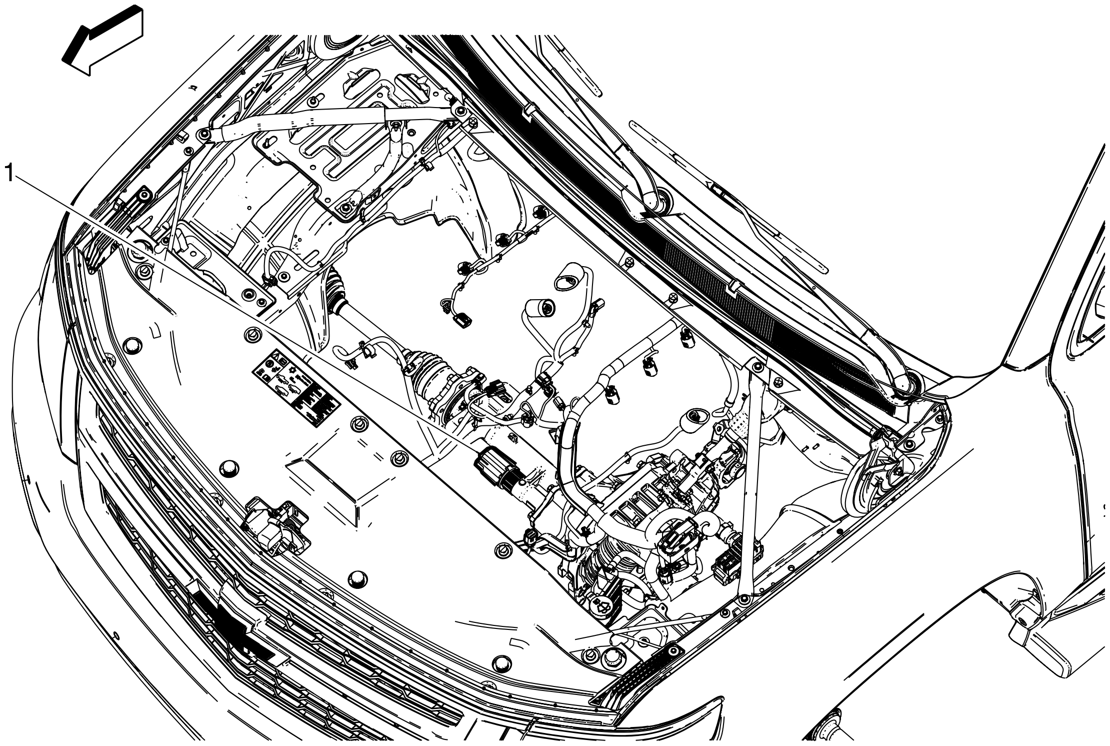
1. B9 Ambient Air Temperature Sensor
2. B55 Hood Ajar Switch
3. B59R Front Impact Sensor - Right
4. B59L Front Impact Sensor - Left



Items

1. P12 Horn
2. G10L Cooling Fan Motor - Left
3. G10R Cooling Fan Motor - Right

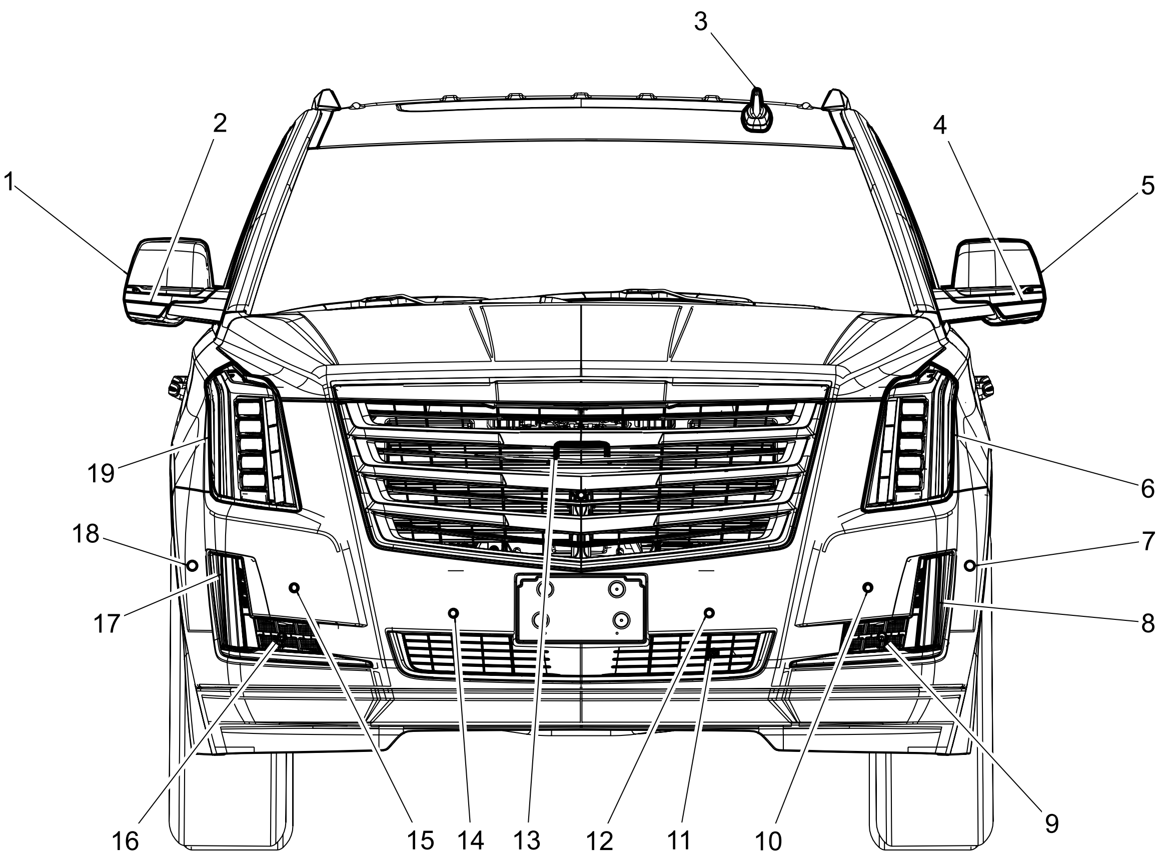
Front Axle Components



Items

1. M26 Front Axle Engagement Actuator (NP0 or NQH)

Front of Vehicle Components (Z75)

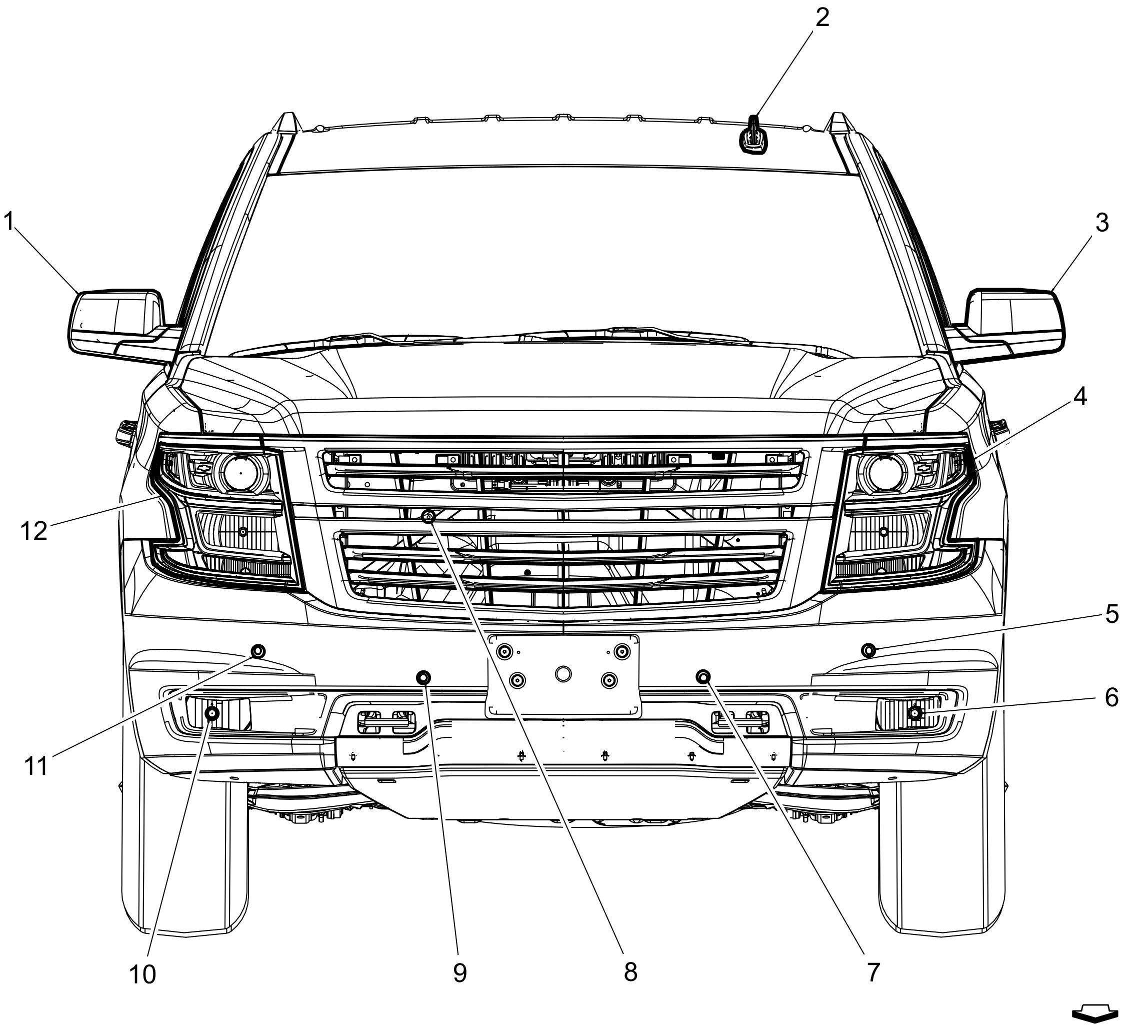


Items

1. A9B Outside Rearview Mirror - Passenger
2. E8YP Outside Rearview Mirror Courtesy Lamp - Passenger (DL3)
3. T4G Cellular Phone, Navigation, and Digital Radio Antenna
4. E8YD Outside Rearview Mirror Courtesy Lamp - Driver (DL3)
5. A9A Outside Rearview Mirror - Driver
6. E13LA Headlamp Assembly - Left
7. B306K Parking Assist Sensor - Side Left Front (UKG)
8. E4AL Park/Daytime Running Lamp - Left Lower (Z75)
9. E4LF Turn Signal Lamp - Left Front
10. B306A Parking Assist Sensor - Front Left Outer (UD5)
11. B9 Ambient Air Temperature Sensor

11. B9 Ambient Air Temperature Sensor
12. B306B Parking Assist Sensor - Front Left Middle (UD5)
13. B233B Radar Sensor Module - Long Range
14. B306C Parking Assist Sensor - Front Right Middle (UD5)
15. B306D Parking Assist Sensor - Front Right Outer (UD5)
16. E4RF Turn Signal Lamp - Right Front
17. E4AM Park/Daytime Running Lamp - Right Lower (Z75)
18. B306L Parking Assist Sensor - Side Right Front (UKG)
19. E13RA Headlamp Assembly - Right

Front of Vehicle Components (X88)



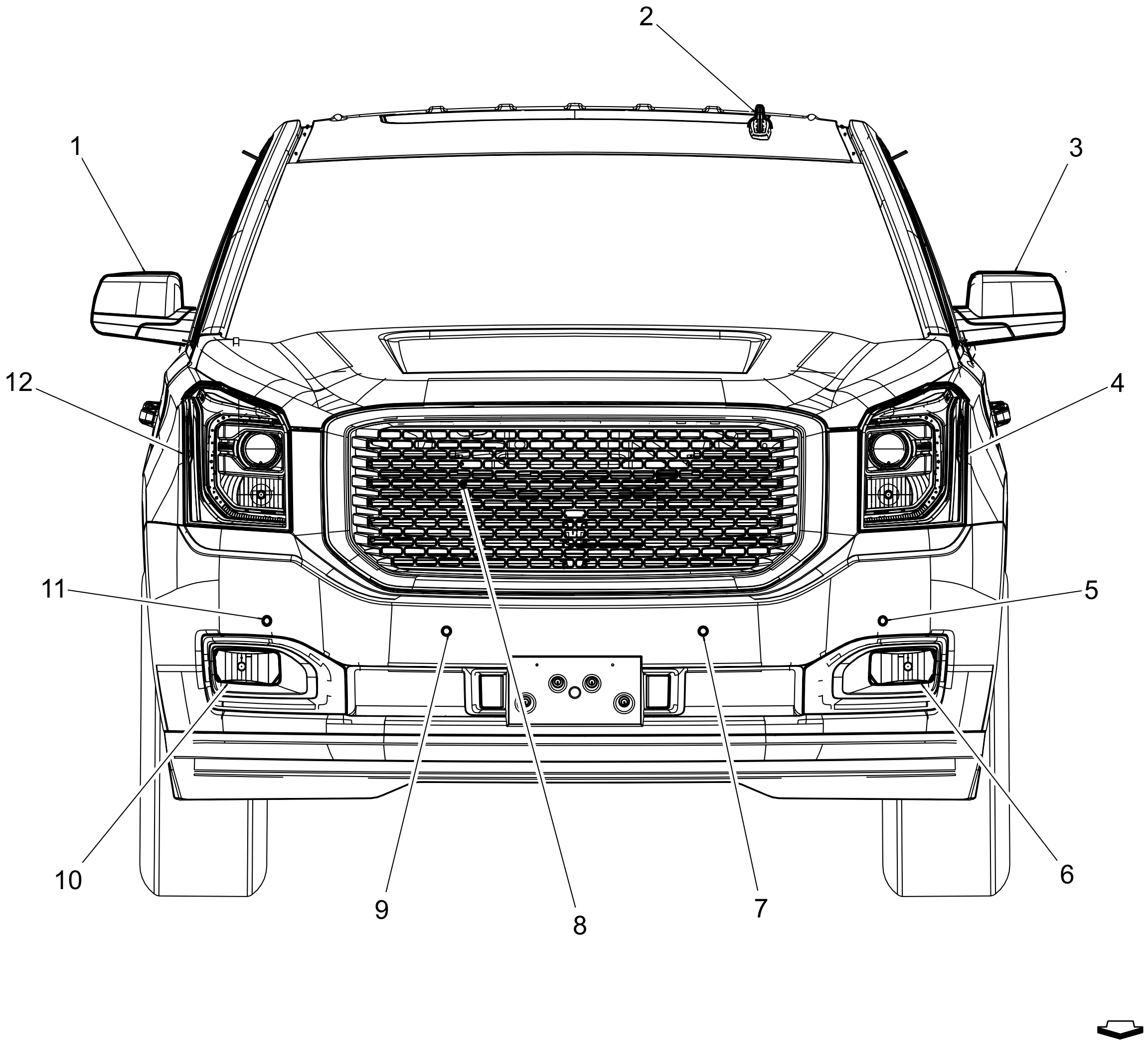
Items

1. A9B Outside Rearview Mirror - Passenger
2. T4G Cellular Phone, Navigation, and Digital Radio Antenna
3. A9A Outside Rearview Mirror - Driver
4. E13LA Headlamp Assembly - Left
5. B306A Parking Assist Sensor - Front Left Outer (UD5)
6. E29LF Fog Lamp - Left Front (T3U)
7. B306B Parking Assist Sensor - Front Left Middle (UD5)
8. B9 Ambient Air Temperature Sensor
9. B306C Parking Assist Sensor - Front Right Middle (UD5)
10. E29RF Fog Lamp - Right Front (T3U)
11. B306D Parking Assist Sensor - Front Right Outer (UD5)

11. B306D Parking Assist Sensor - Front Right Outer (UD5)

12. E13RA Headlamp Assembly - Right

Front of Vehicle Components (Z88)



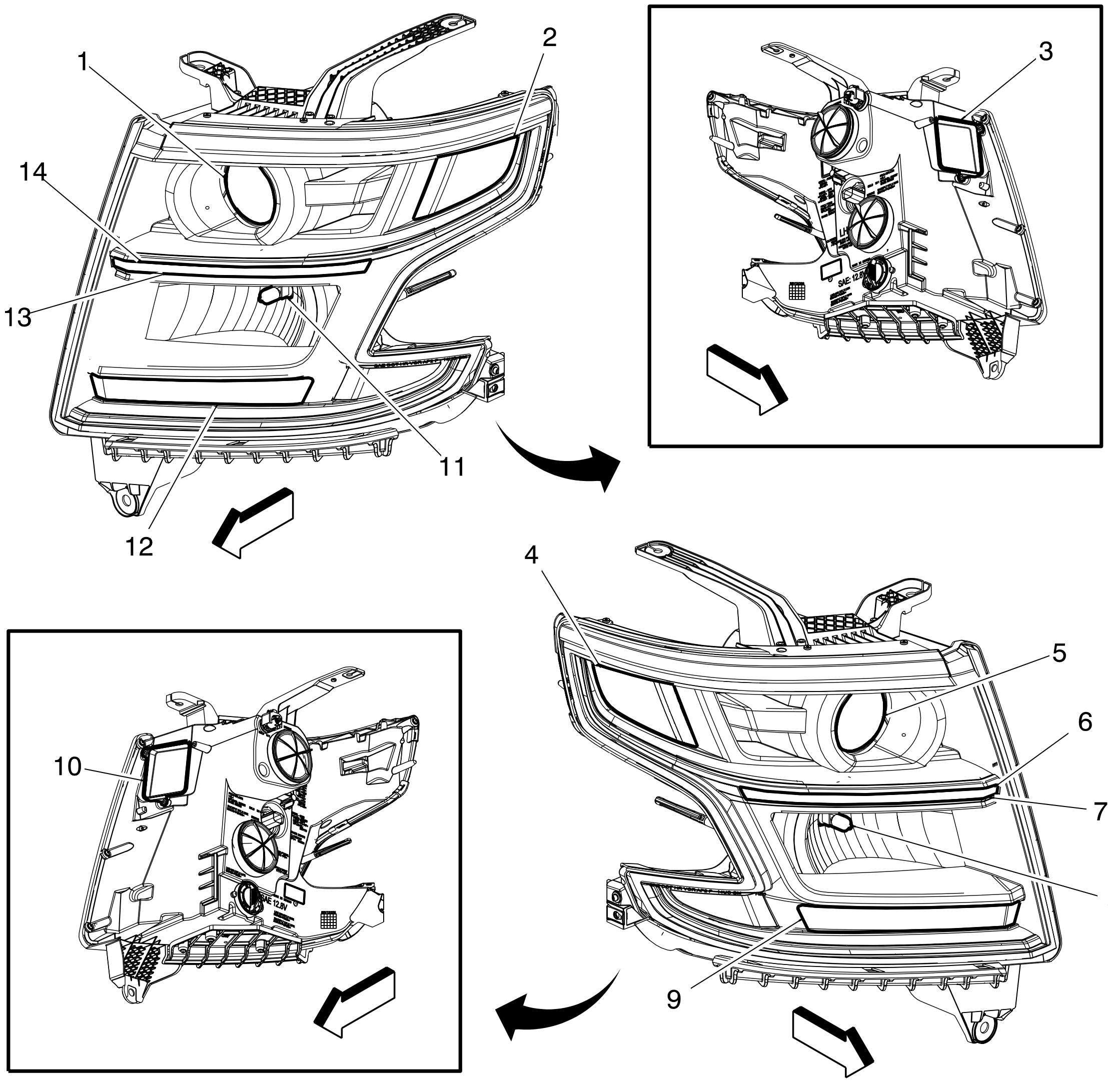
Items

1. A9B Outside Rearview Mirror - Passenger
2. T4G Cellular Phone, Navigation, and Digital Radio Antenna
3. A9A Outside Rearview Mirror - Driver
4. E13LA Headlamp Assembly - Left
5. B306A Parking Assist Sensor - Front Left Outer (UD5)
6. E29LF Fog Lamp - Left Front (T3U)
7. B306B Parking Assist Sensor - Front Left Middle (UD5)
8. B9 Ambient Air Temperature Sensor
9. B306C Parking Assist Sensor - Front Right Middle (UD5)
10. E29RF Fog Lamp - Right Front (T3U)
11. B306D Parking Assist Sensor - Front Right Outer (UD5)

11. B306D Parking Assist Sensor - Front Right Outer (UD5)

12. E13RA Headlamp Assembly - Right

Headlamp Components (X88)

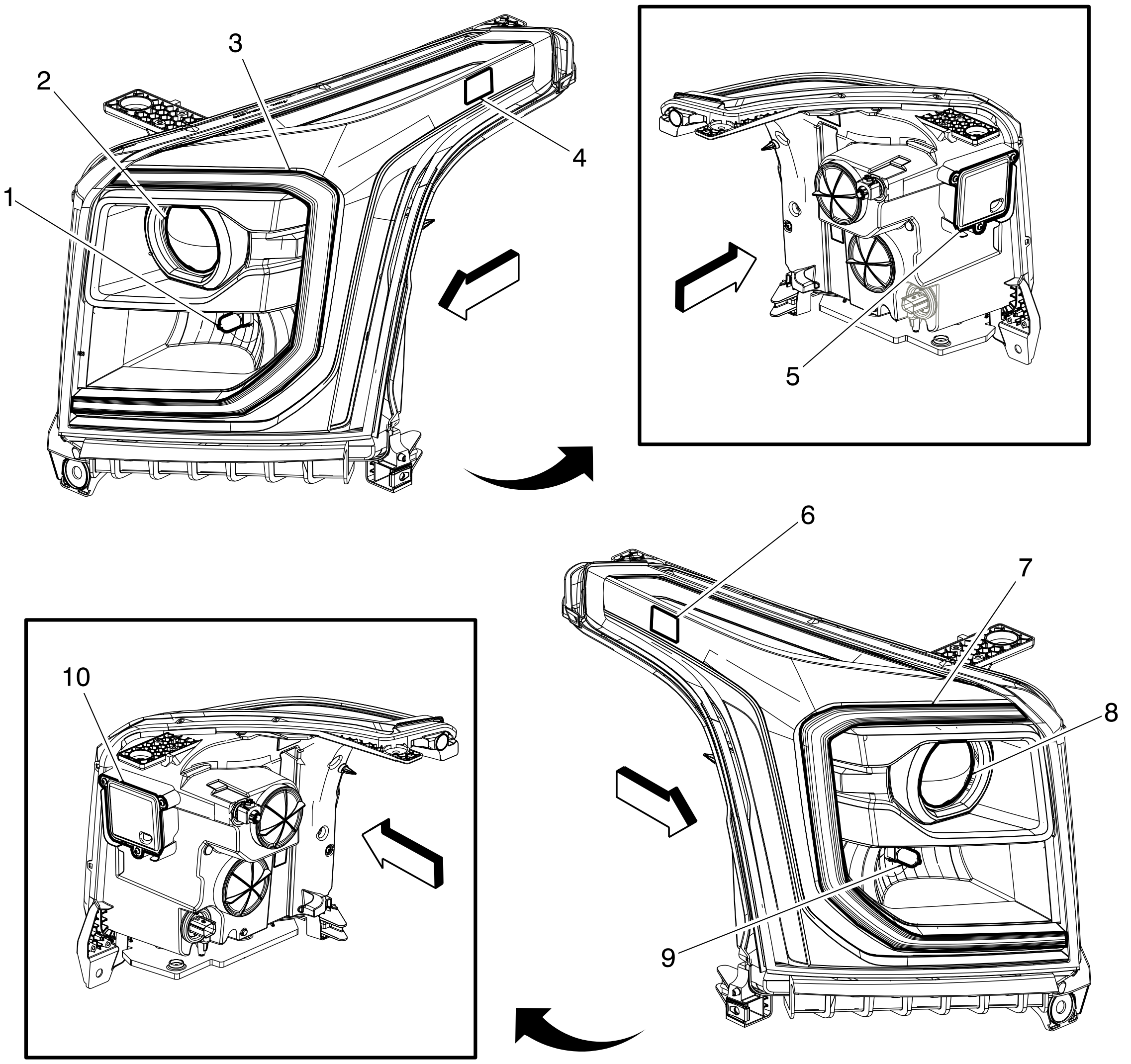


Items

1. E4G Headlamp - Left Low Beam
2. E2LF Side Marker Lamp - Left Front
3. T7L Headlamp Ballast - Left (T4F)
4. E2RF Side Marker Lamp - Right Front
5. E4H Headlamp - Right Low Beam
6. E4AD Park/Daytime Running Lamp - Right (X88 or Z88)
7. E4K Park Lamp - Right Front (X88 without Y91)
8. E4F Headlamp - Right High Beam
9. E4RF Turn Signal Lamp - Right Front
10. T7R Headlamp Ballast - Right (T4F)
11. E4E Headlamp - Left High Beam

11. E4E Headlamp - Left High Beam
12. E4LF Turn Signal Lamp - Left Front
13. E4AC Park/Daytime Running Lamp - Left (X88 or Z88)
14. E4J Park Lamp - Left Front (X88 without Y91)

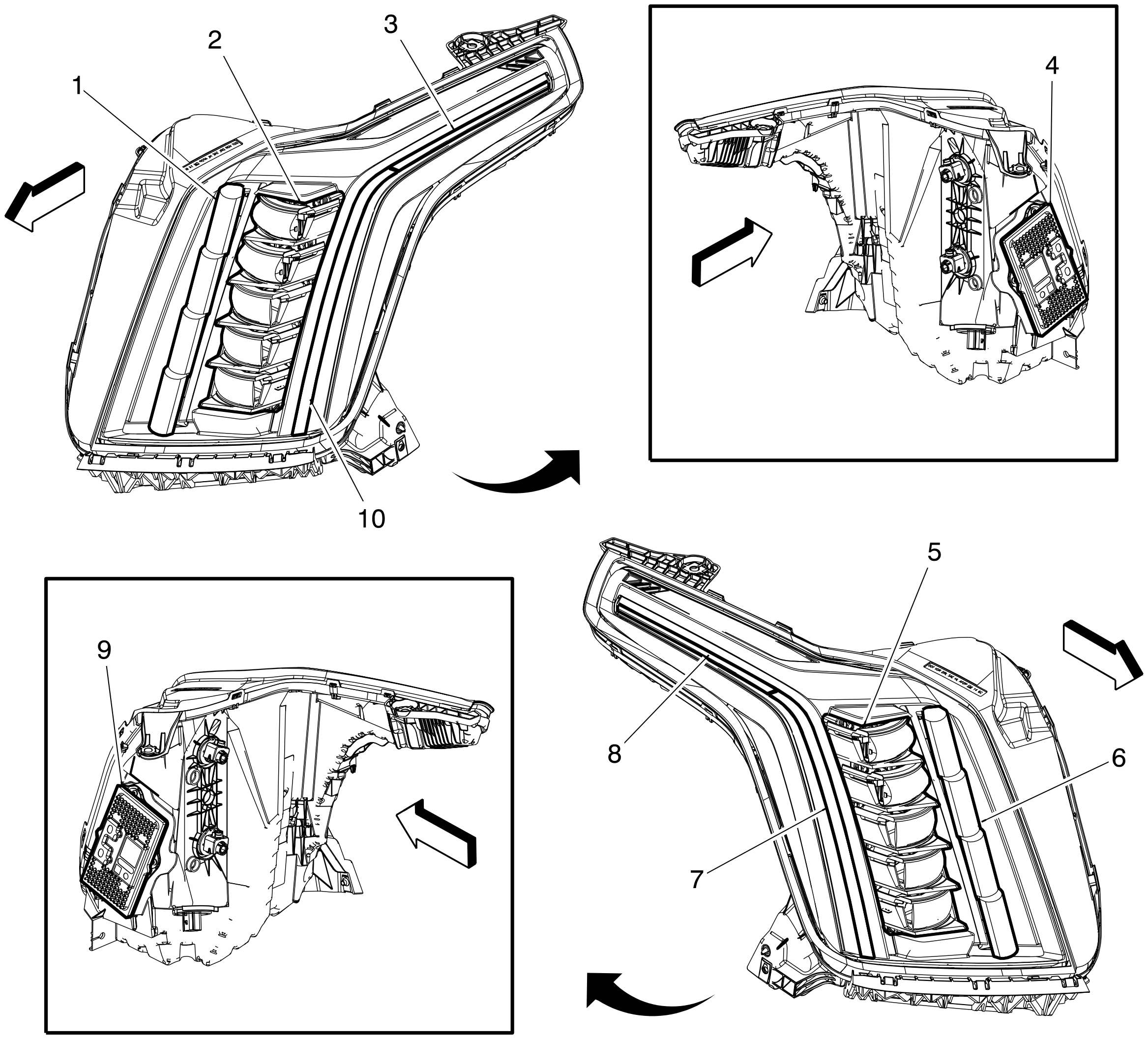
Headlamp Components (Z88)



Items

1. E4E Headlamp - Left High Beam
2. E4G Headlamp - Left Low Beam
3. E4AC Park/Daytime Running Lamp - Left (X88 or Z88)
4. E2LF Side Marker Lamp - Left Front
5. T7L Headlamp Ballast - Left (T4F)
6. E2LF Side Marker Lamp - Left Front
7. E4AD Park/Daytime Running Lamp - Right (X88 or Z88)
8. E4H Headlamp - Right Low Beam
9. E4F Headlamp - Right High Beam
10. T7R Headlamp Ballast - Right (T4F)

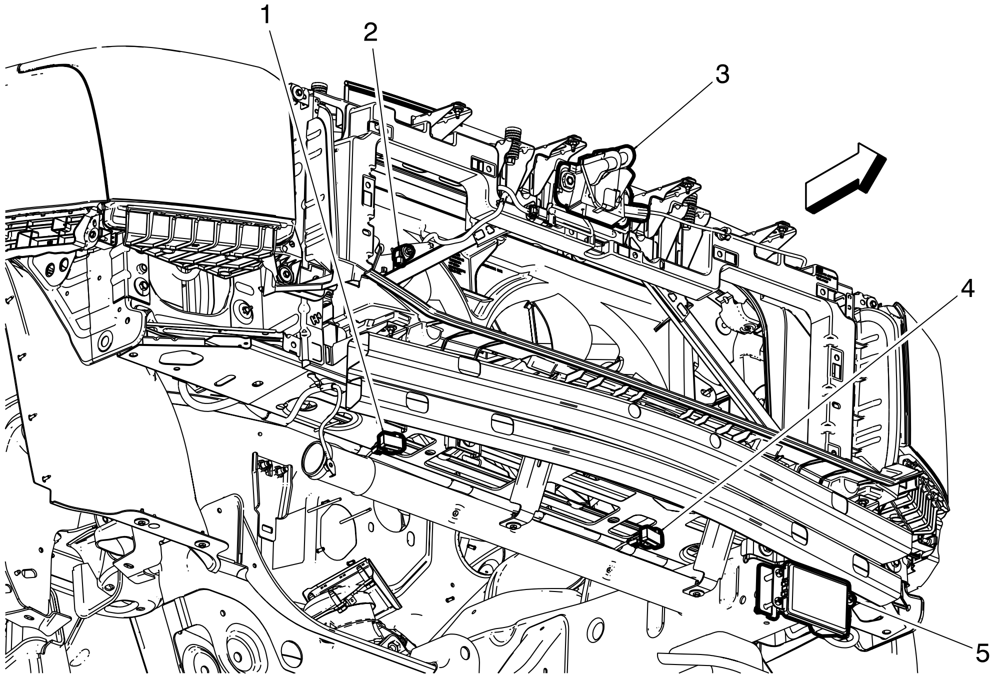
Headlamp Components (Z75)



Items

1. E4E Headlamp - Left High Beam
2. E4G Headlamp - Left Low Beam
3. E2LF Side Marker Lamp - Left Front
4. K166L Multifunction LED Control Module - Left Headlamp
5. E4H Headlamp - Right Low Beam
6. E4F Headlamp - Right High Beam
7. E4D Daytime Running Lamp - Right (Z75)
8. E2RF Side Marker Lamp - Right Front
9. K166R Multifunction LED Control Module - Right Headlamp
10. E4C Daytime Running Lamp - Left (Z75)

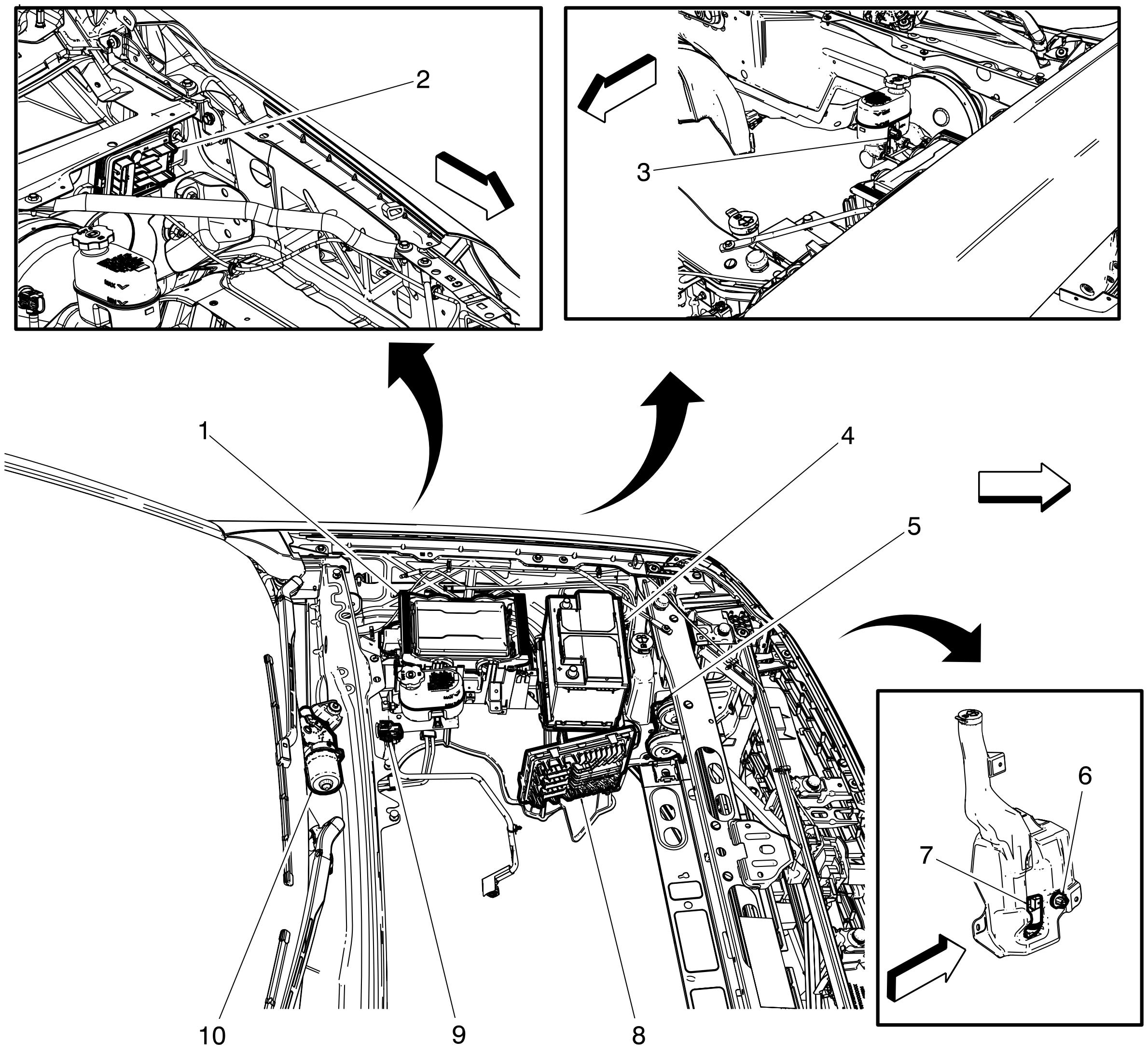
Behind Front Fascia Components (X88/Z88)



Items

1. B59R Front Impact Sensor - Right
2. B9 Ambient Air Temperature Sensor
3. B55 Hood Ajar Switch
4. B59L Front Impact Sensor - Left
5. K14 Distance Sensing Cruise Control Module (K59)

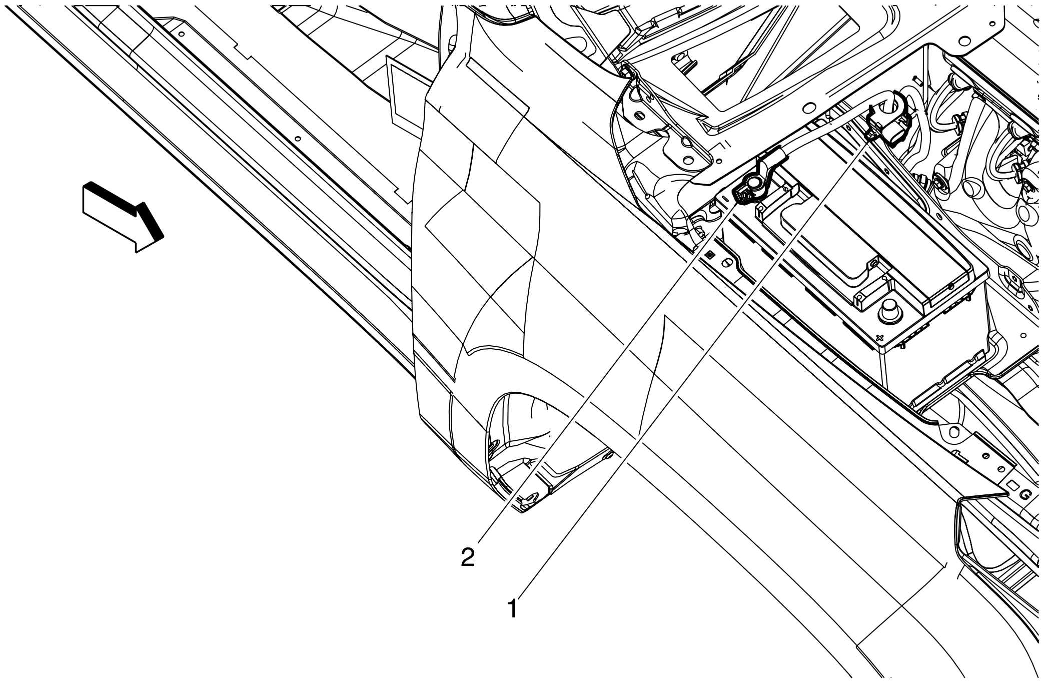
Left Side of Engine Compartment Component View



Items

1. X50A Fuse Block - Underhood
2. K71 Transmission Control Module
3. B20 Brake Fluid Level Switch
4. C1B Battery - Auxiliary (5W4 or 9C1)
5. P12 Horn
6. B118B Windshield Washer Fluid Level Switch
7. G24 Windshield Washer Pump
8. K20 Engine Control Module
9. B19B Brake Booster Vacuum Sensor
10. M75 Windshield Wiper Motor

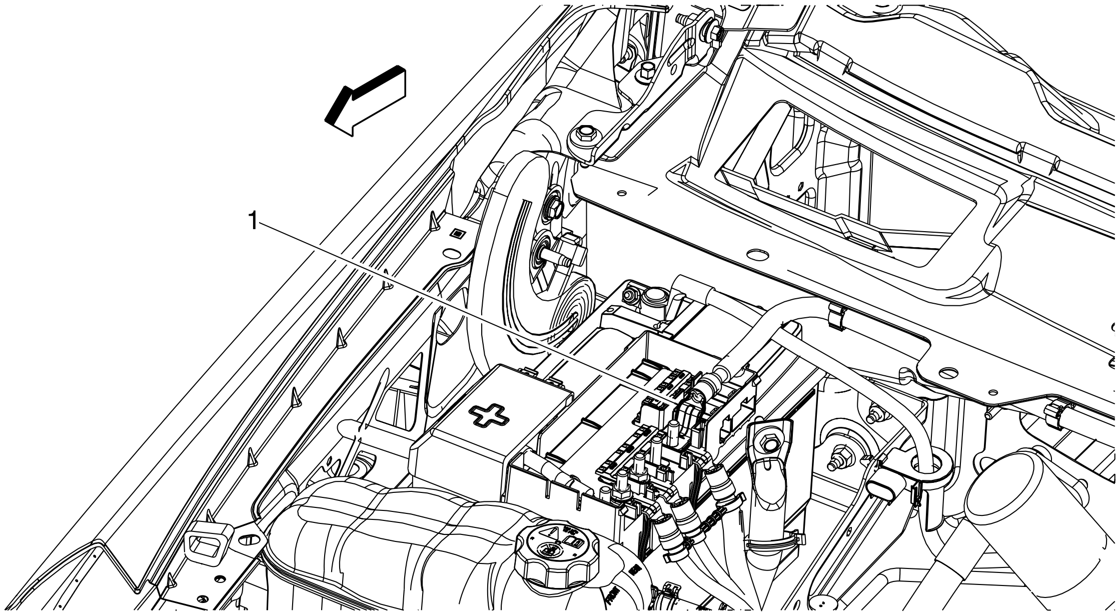
Right Rear of Engine Compartment Components (1 of 2)



Items

1. B18 Battery Current Sensor
2. C1 Battery

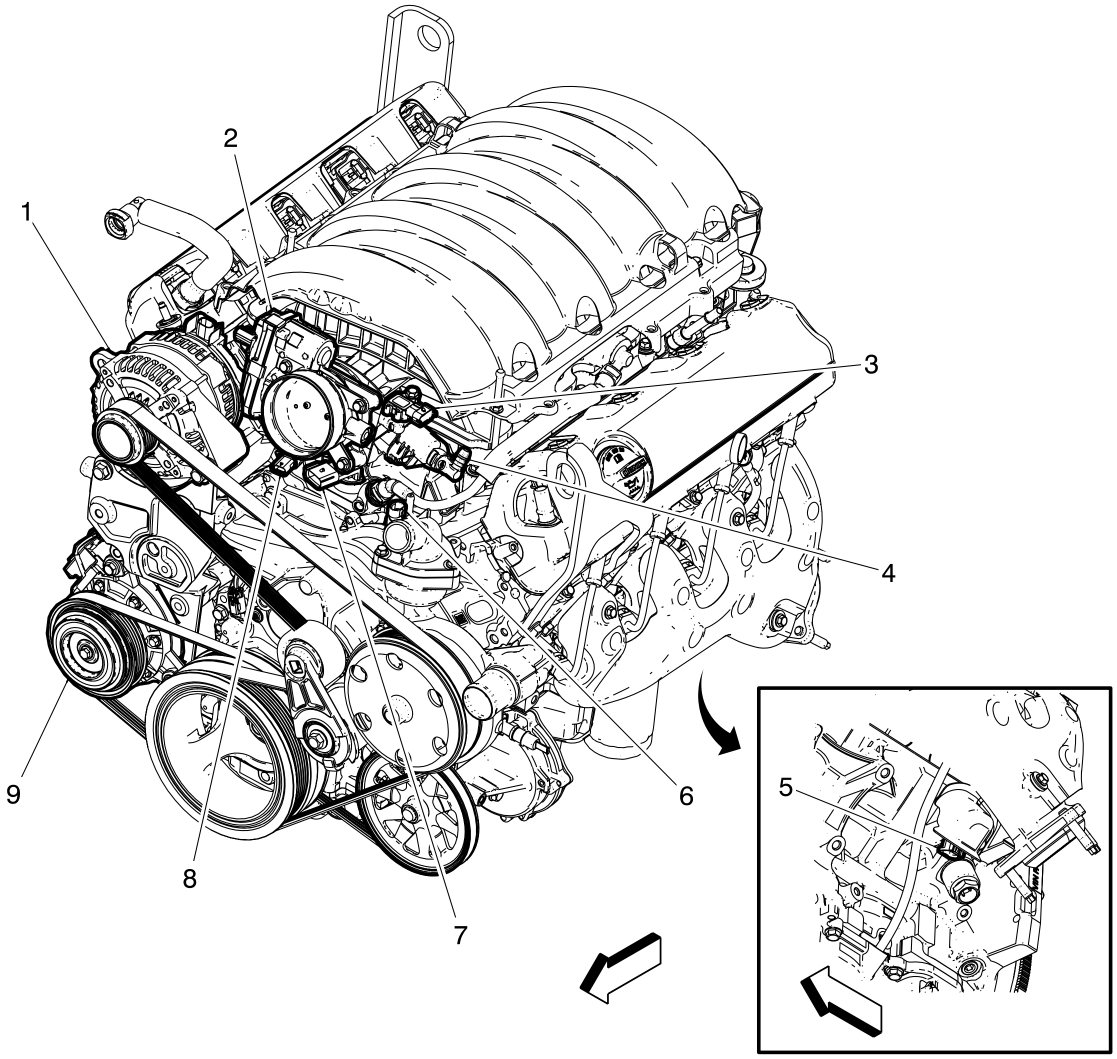
Right Rear of Engine Compartment Components (2 of 2)



Items

1. X50D Fuse Block - Battery

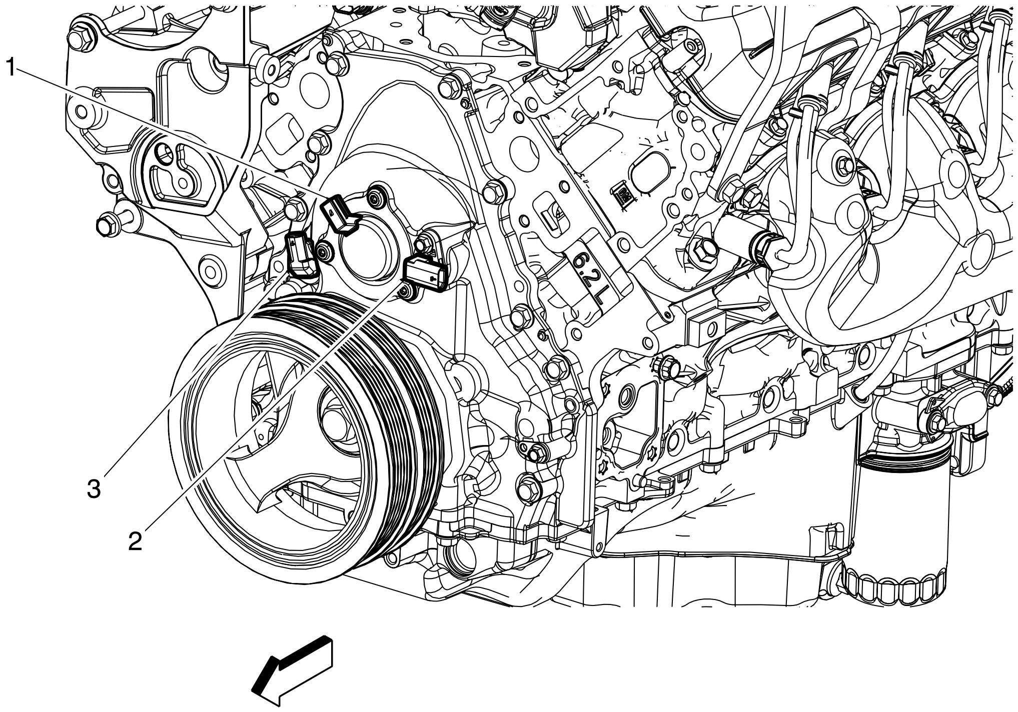
Left Side of Engine Components (L83 or L86)



Items

1. G13 Generator
2. Q38 Throttle Body
3. B74 Manifold Absolute Pressure Sensor
4. Q12 Evaporative Emission Purge Solenoid Valve
5. B68A Knock Sensor 1
6. B34 Engine Coolant Temperature Sensor
7. Q43 Valve Lifter Oil Manifold Assembly (L83 or L86)
8. B37B Engine Oil Pressure Sensor
9. G1 A/C Compressor

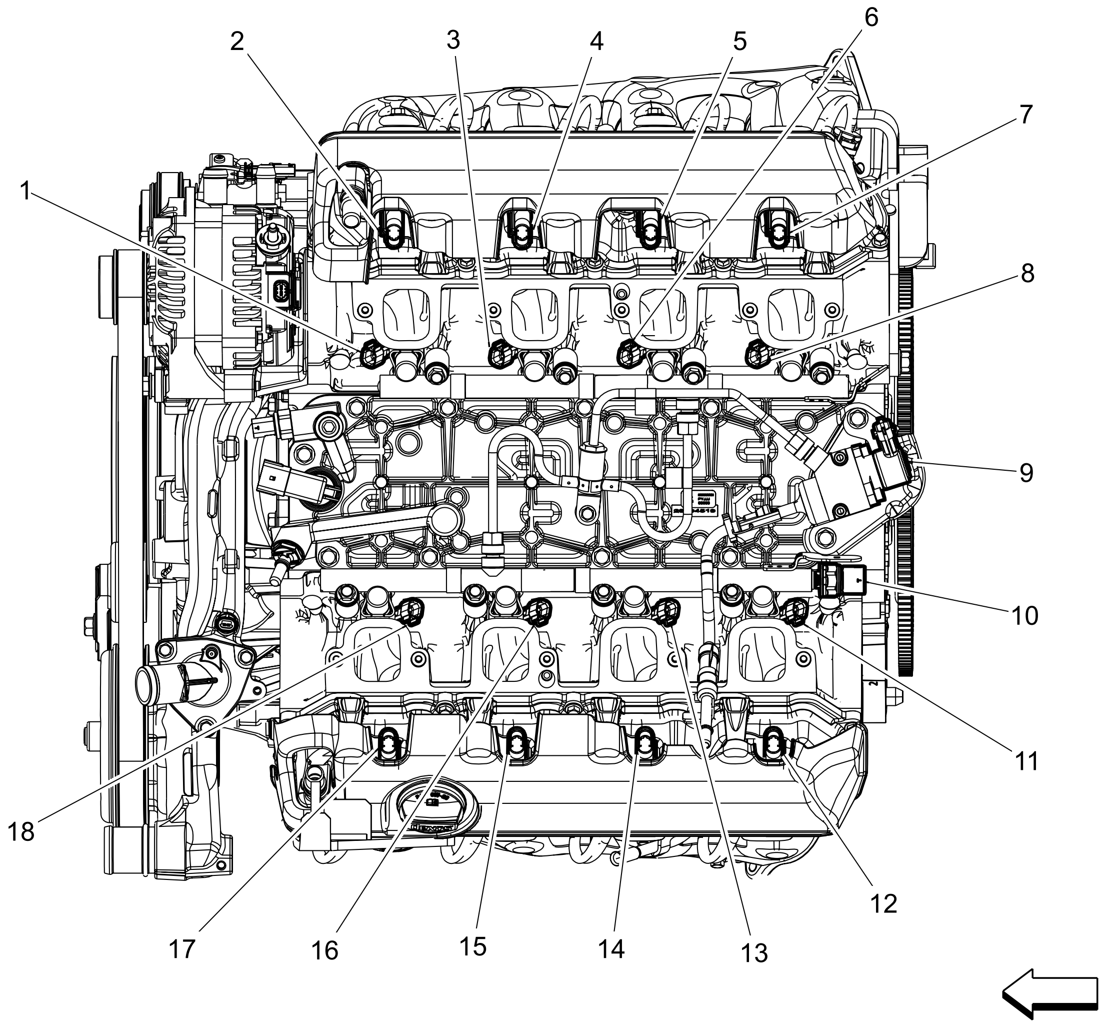
Front of Engine Components (L83 or L86)



Items

1. Q6 Camshaft Position Actuator Solenoid Valve
2. B23 Camshaft Position Sensor
3. Q44 Engine Oil Pressure Control Solenoid Valve (L83 or L86)

Top of Engine Components (L83 or L86)



Items

1. Q17B Fuel Injector 2
2. T8B Ignition Coil 2
3. Q17D Fuel Injector 4
4. T8D Ignition Coil 4
5. T8F Ignition Coil 6
6. Q17F Fuel Injector 6
7. T8H Ignition Coil 8
8. Q17H Fuel Injector 8
9. G18 High Pressure Fuel Pump (L83 or L86)
10. B310 Fuel Pressure/Temperature Sensor (L86 or L83)
11. Q17G Fuel Injector 7

11. Q17G Fuel Injector 7

12. T8G Ignition Coil 7

13. Q17E Fuel Injector 5

14. T8E Ignition Coil 5

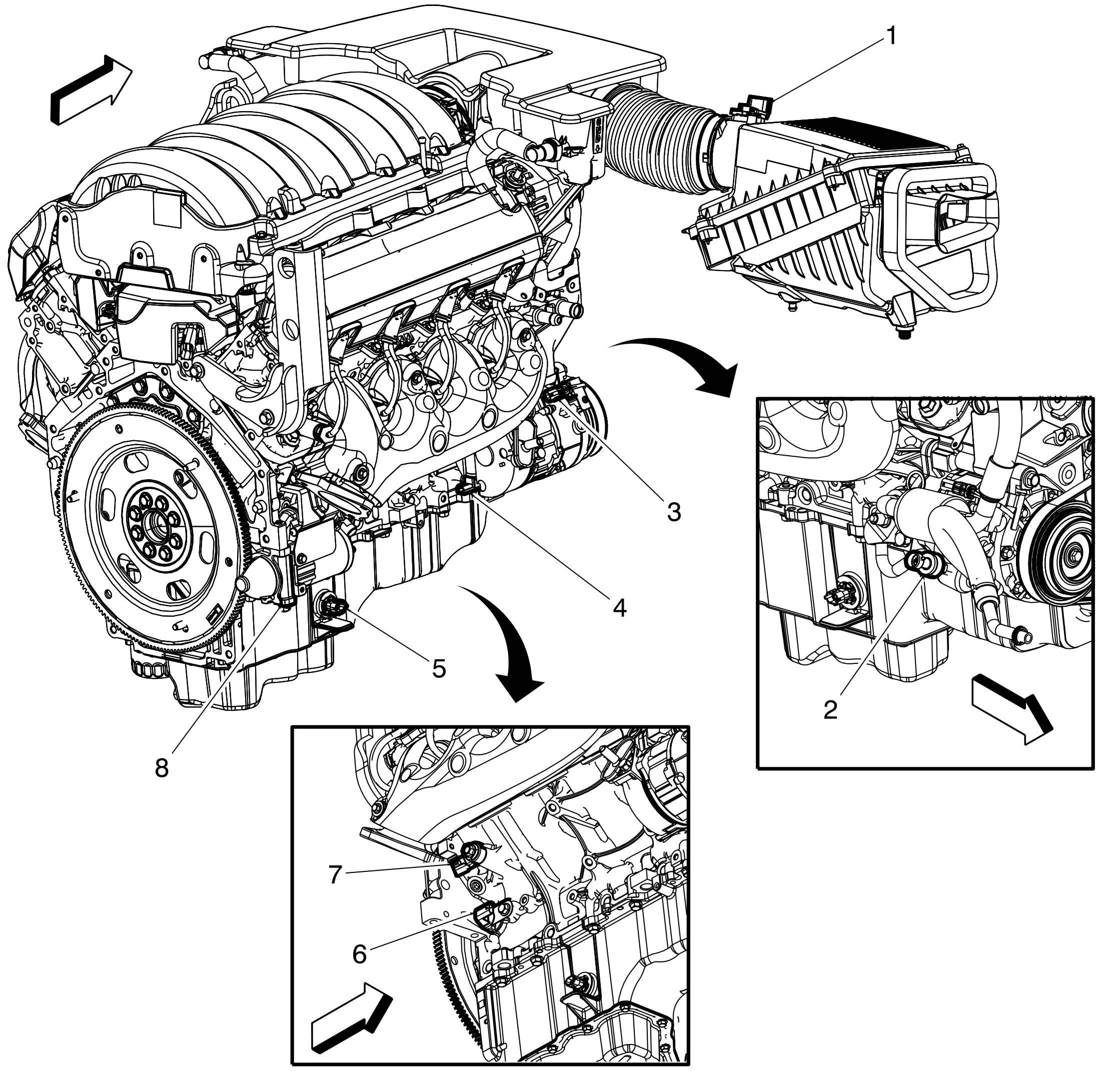
15. T8C Ignition Coil 3

16. Q17C Fuel Injector 3

17. T8A Ignition Coil 1

18. Q17A Fuel Injector 1

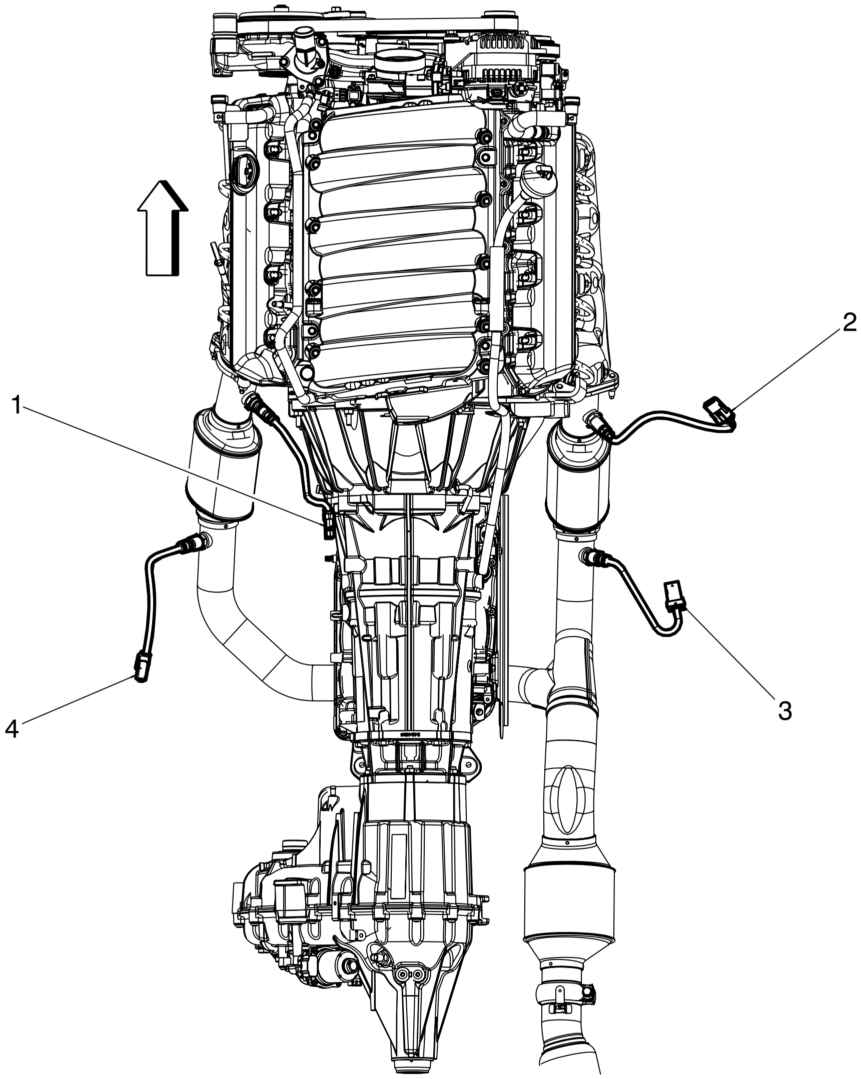
Right Rear Side of Engine Components (L83 or L86)



Items

1. B75C Multifunction Intake Air Sensor
2. B1 A/C Refrigerant Pressure Sensor
3. Q2 A/C Compressor Clutch
4. Q46 A/C Compressor Solenoid Valve
5. B35 Engine Oil Level Switch (L83 or L86)
6. B26 Crankshaft Position Sensor
7. B68B Knock Sensor 2
8. M64 Starter Motor

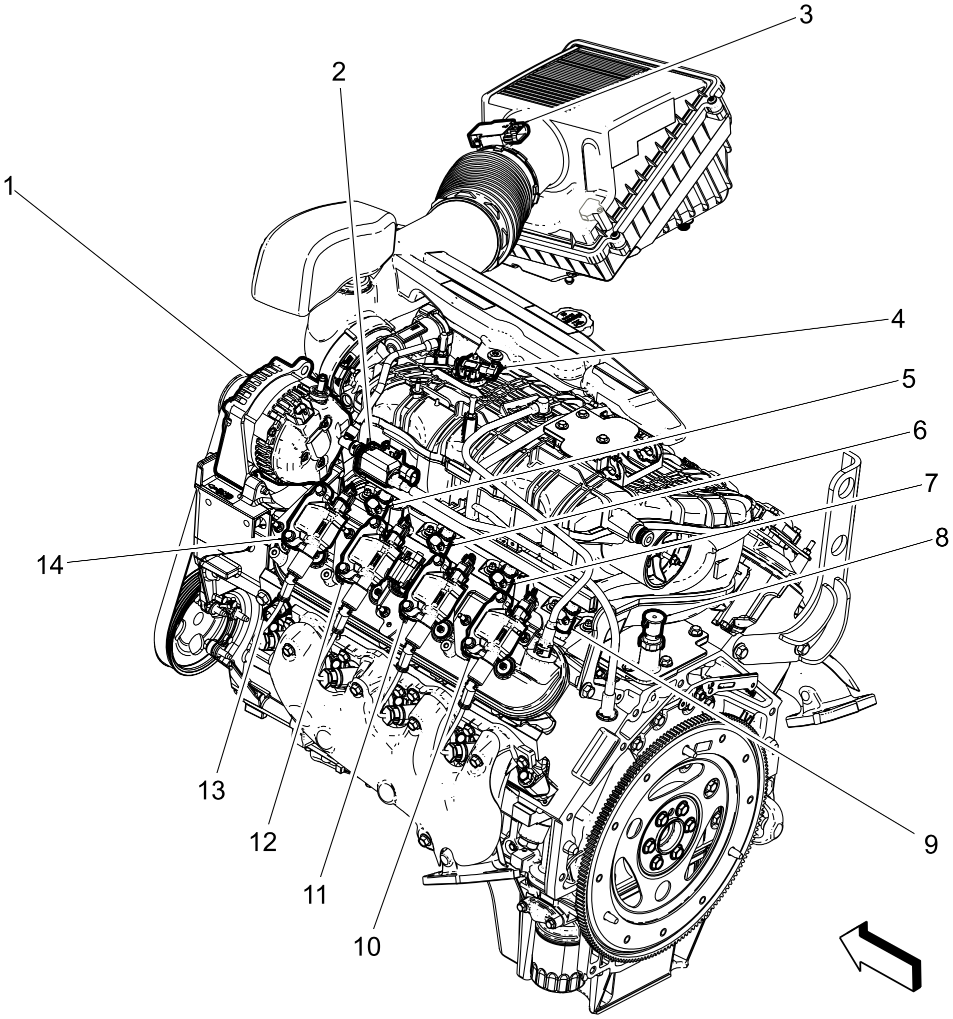
Heated Oxygen Sensors (L83 or L86)



Items

1. B52C Heated Oxygen Sensor - Bank 1 Sensor 1
2. B52E Heated Oxygen Sensor - Bank 2 Sensor 1
3. B52F Heated Oxygen Sensor - Bank 2 Sensor 2
4. B52D Heated Oxygen Sensor - Bank 1 Sensor 2

Left Rear Side of Engine Components (L96)

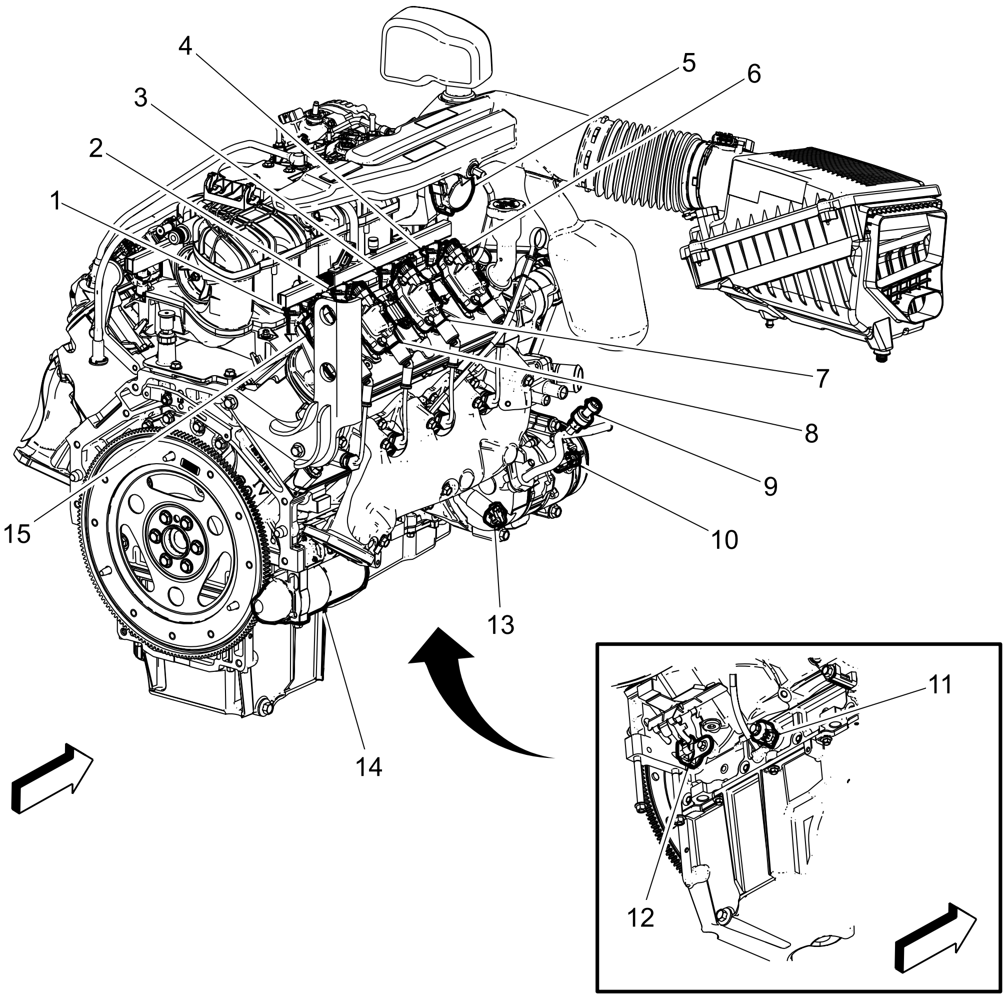


Items

1. G13 Generator
2. Q12 Evaporative Emission Purge Solenoid Valve
3. B75C Multifunction Intake Air Sensor
4. B74 Manifold Absolute Pressure Sensor
5. Q17A Fuel Injector 1
6. Q17C Fuel Injector 3
7. Q17E Fuel Injector 5
8. B37B Engine Oil Pressure Sensor
9. Q17G Fuel Injector 7
10. T8G Ignition Coil 7
11. T8E Ignition Coil 5

11. T8E Ignition Coil 5
12. T8C Ignition Coil 3
13. B34 Engine Coolant Temperature Sensor
14. T8A Ignition Coil 1

Right Rear Side of Engine Components (L96)



Items

1. Q17H Fuel Injector 8
2. Q17F Fuel Injector 6
3. Q17D Fuel Injector 4
4. Q17B Fuel Injector 2
5. Q38 Throttle Body
6. T8B Ignition Coil 2
7. T8D Ignition Coil 4
8. T8F Ignition Coil 6
9. B1 A/C Refrigerant Pressure Sensor
10. Q2 A/C Compressor Clutch
11. B68B Knock Sensor 2

11. B68B Knock Sensor 2

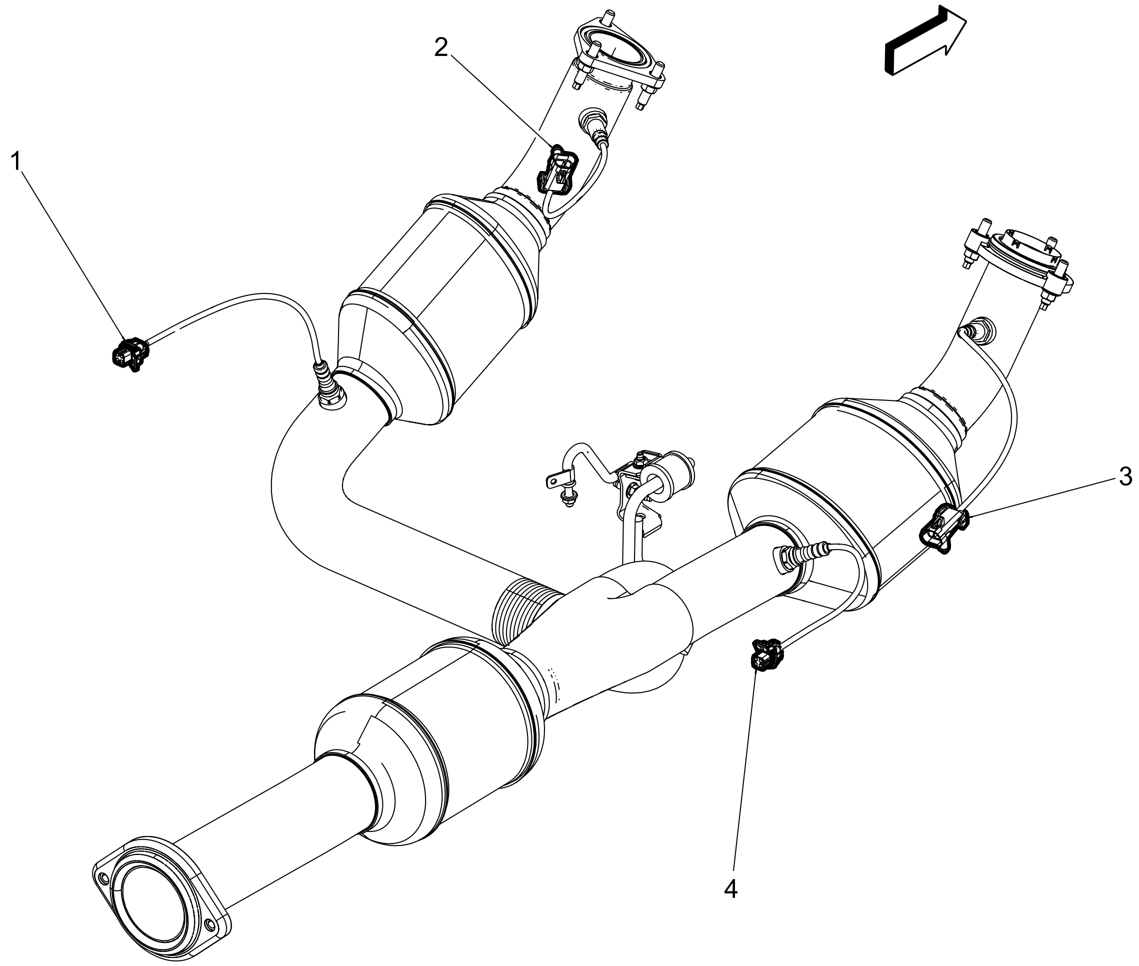
12. B26 Crankshaft Position Sensor

13. Q46 A/C Compressor Solenoid Valve

14. M64 Starter Motor

15. T8H Ignition Coil 8

Heated Oxygen Sensors (L96)



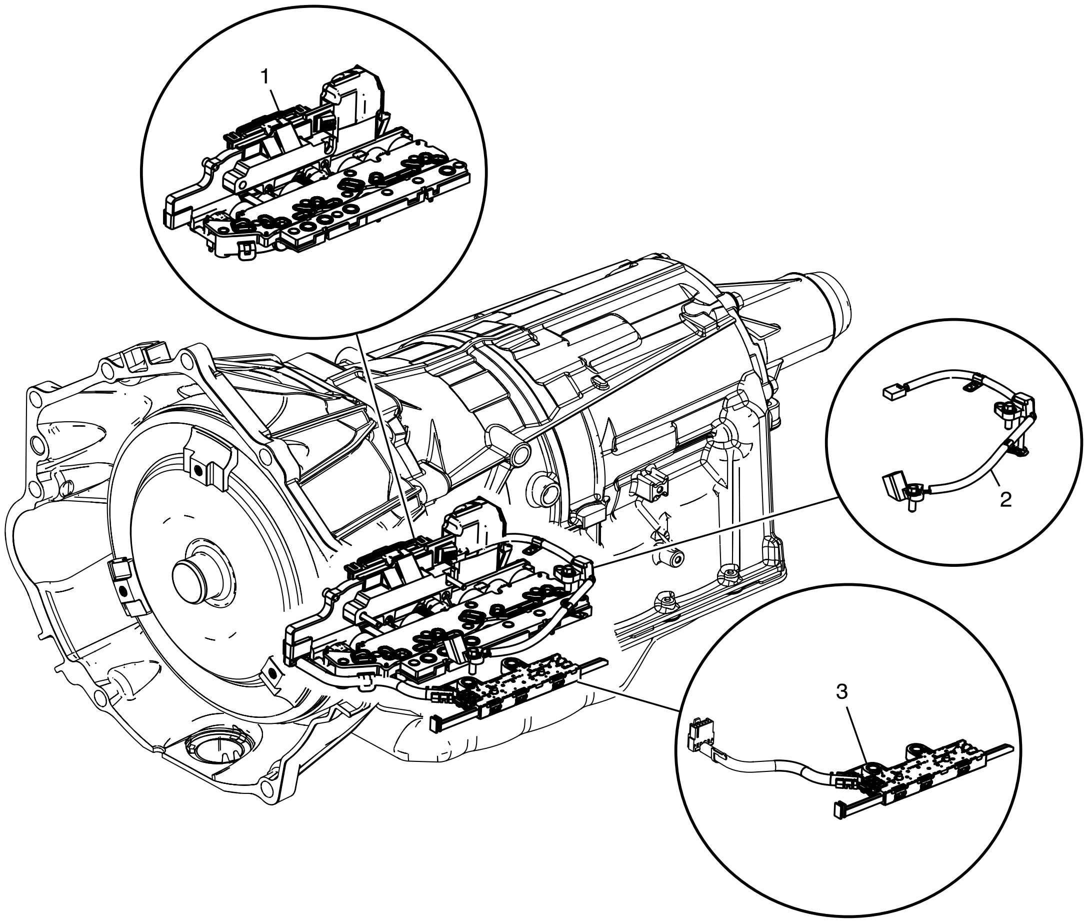
Items

1. B52D Heated Oxygen Sensor - Bank 1 Sensor 2

2. B52C Heated Oxygen Sensor - Bank 1 Sensor 1

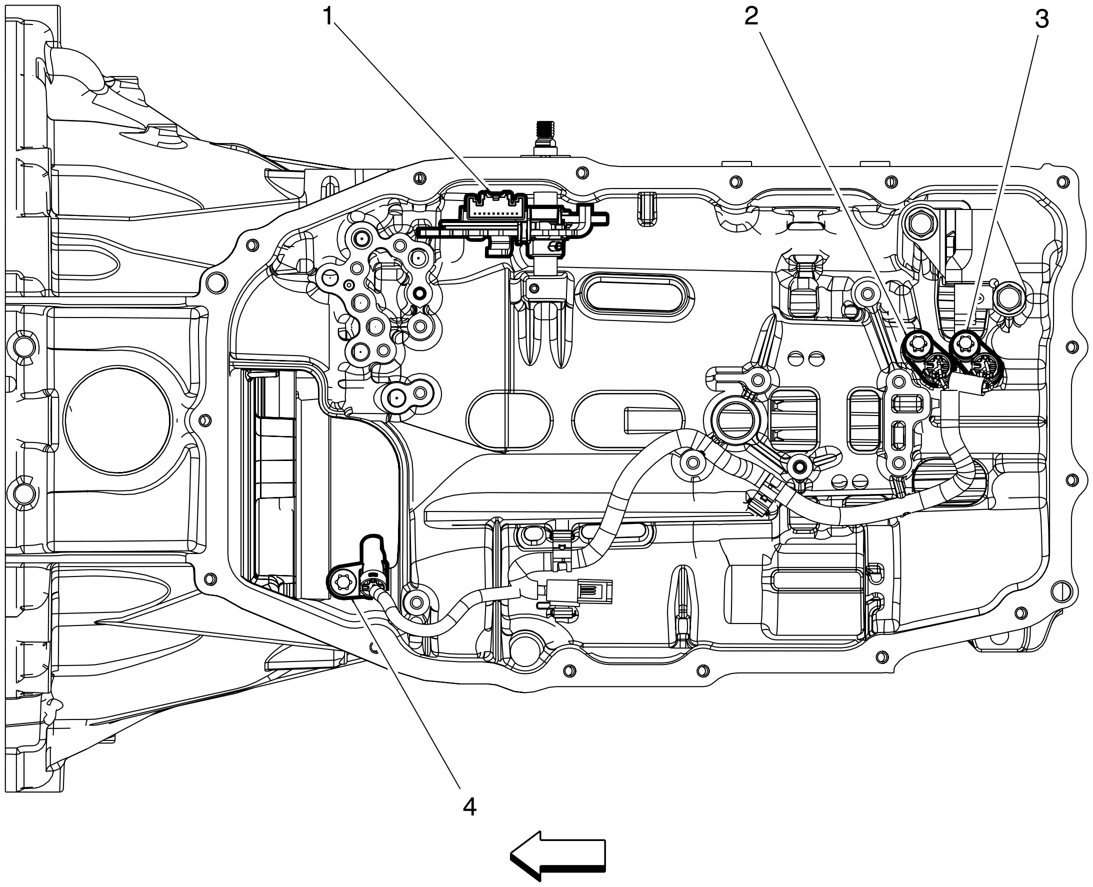
3. B52E Heated Oxygen Sensor - Bank 2 Sensor 1

4. B52F Heated Oxygen Sensor - Bank 2 Sensor 2



Items

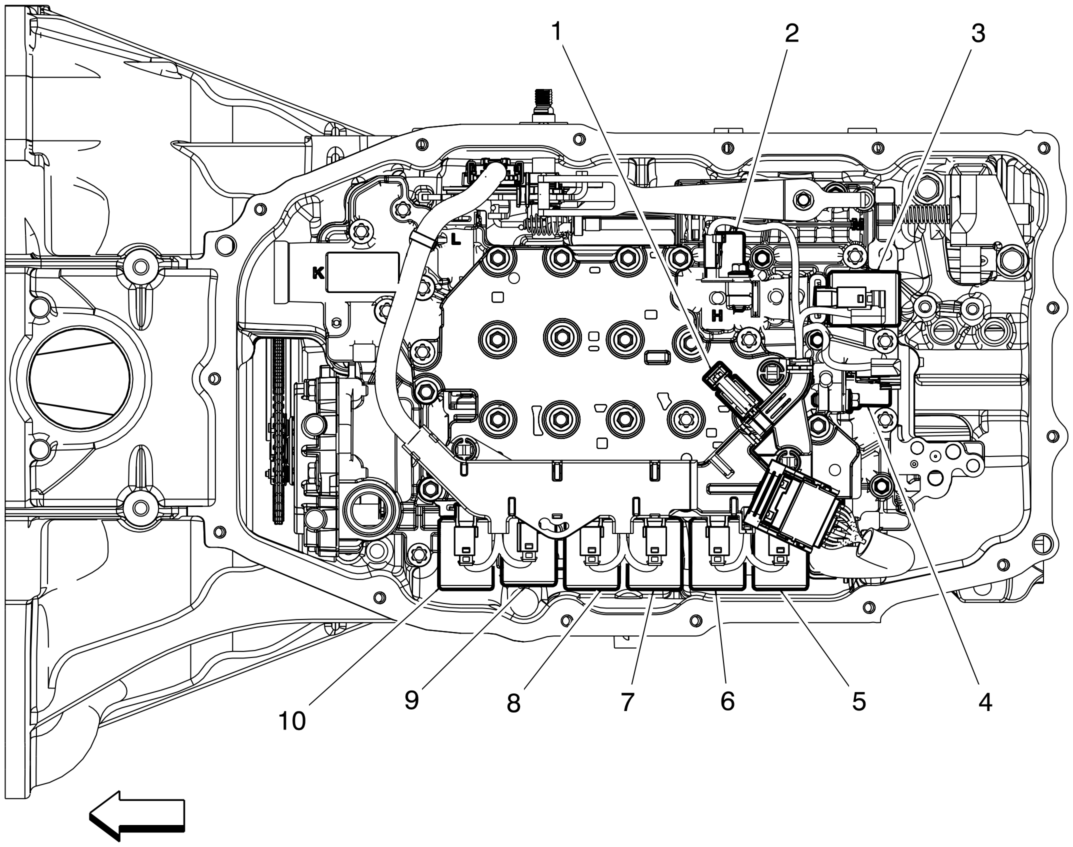
1. Q8 Control Solenoid Valve Assembly (MYC or MYD)
2. B14A Transmission Output Shaft Speed Sensor
3. B15 Transmission Internal Mode Switch (M5U)



Items

1. B15 Transmission Internal Mode Switch (M5U)
2. B14D Transmission Intermediate Shaft Speed Sensor (M5U)
3. B14A Transmission Output Shaft Speed Sensor
4. B14C Transmission Input Shaft Speed Sensor

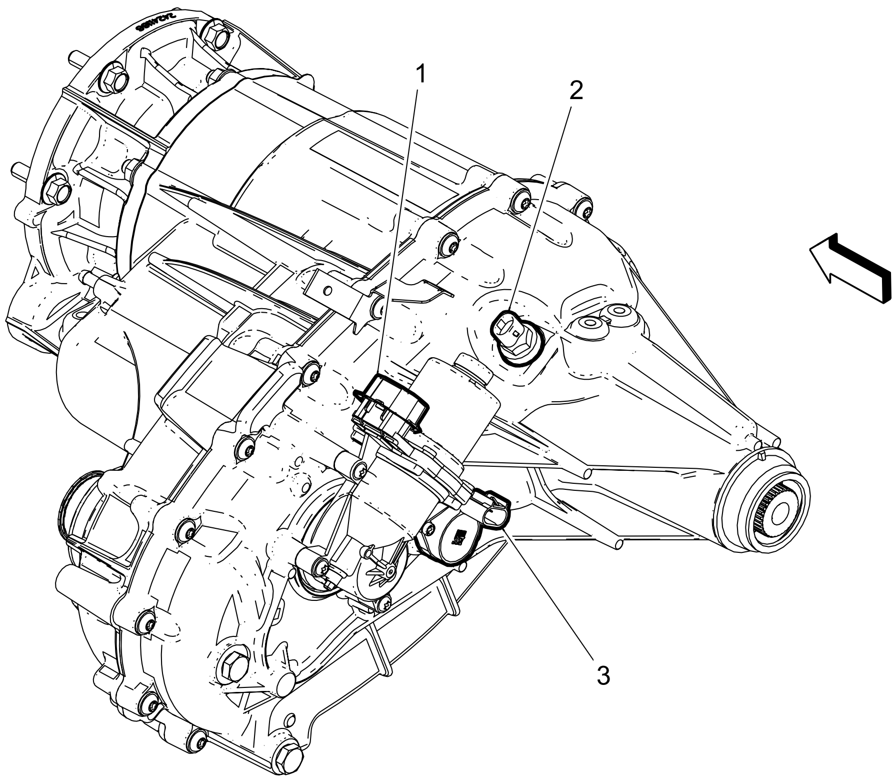
Automatic Transmission Valve Body Components (M5U)



Items

1. B13 Transmission Fluid Temperature Sensor
2. Q77H Transmission Control Solenoid Valve 8 (M5U)
3. Q77F Transmission Control Solenoid Valve 6 (M5U)
4. Q77J Transmission Control Solenoid Valve 9 (M5U)
5. Q77B Transmission Control Solenoid Valve 2 (M5U)
6. Q77A Transmission Control Solenoid Valve 1 (M5U)
7. Q77E Transmission Control Solenoid Valve 5 (M5U)
8. Q77C Transmission Control Solenoid Valve 3 (M5U)
9. Q77D Transmission Control Solenoid Valve 4 (M5U)
10. Q77G Transmission Control Solenoid Valve 7 (M5U)

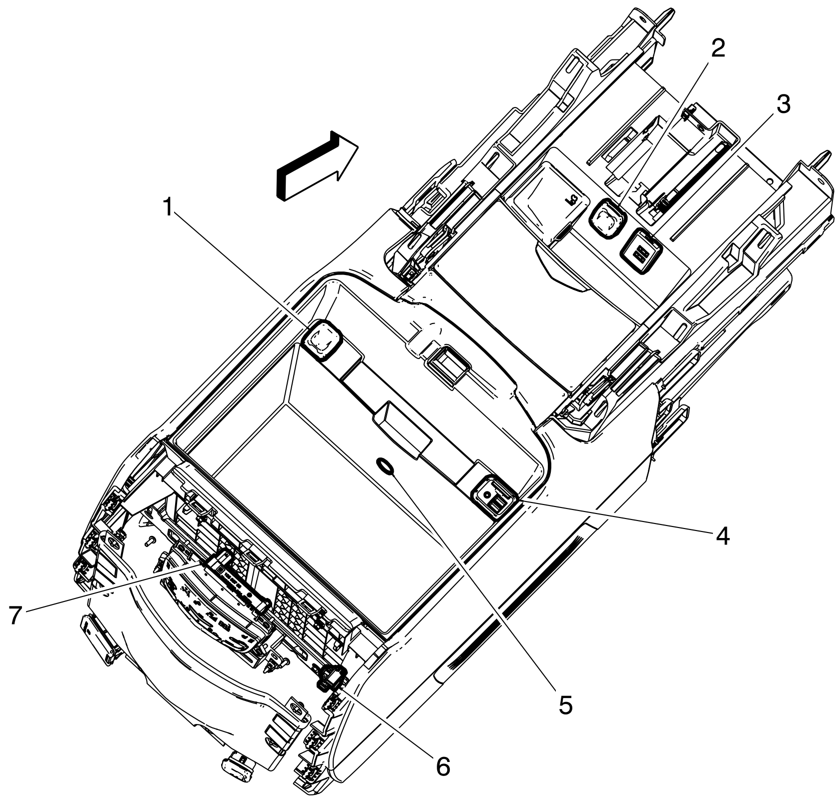
Transfer Case Components (NP0 or NQH)



Items

1. A16 Transfer Case Motor (NP0 or NQH)
2. B115 Vehicle Speed Sensor (NP0 or NQH)
3. B227 Gear Position Sensor (NP0 or NQH)

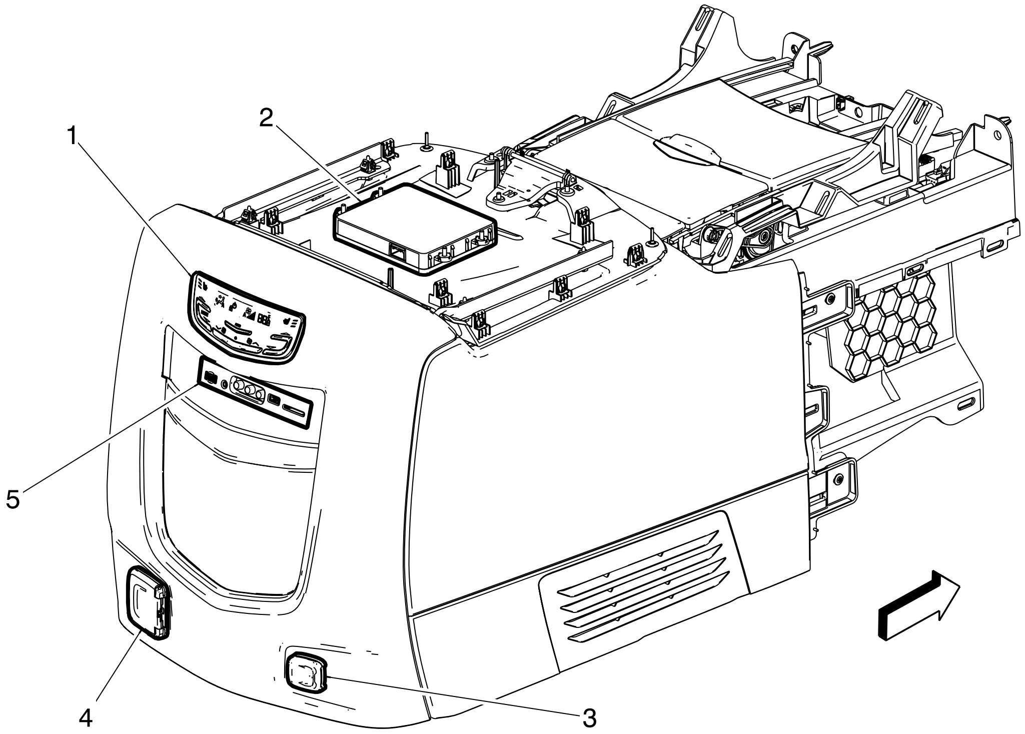
Center Console Top Component Views (Z75)



Items

1. X80D Accessory Power Receptacle - Center Console Compartment
2. X80G Accessory Power Receptacle - Instrument Panel
3. X92 USB Receptacle (D07 with IO5 or IO6)
4. X83 Auxiliary Audio Input
5. E28 Center Console Compartment Lamp (D07 without DCK)
6. S5 Center Console Compartment Lamp Switch (D07)
7. T10K Keyless Entry Antenna - Center Console Rear (ATH or BTM)

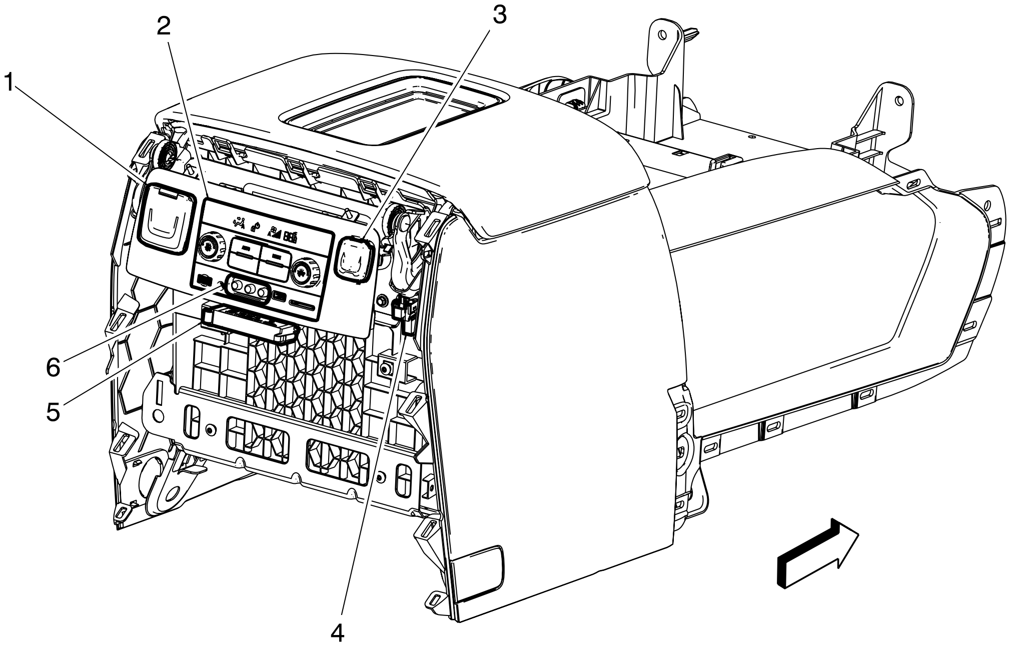
Center Console Rear Component Views (Z75)



Items

1. A34 HVAC Controls - Auxiliary
2. T22 Mobile Device Wireless Charger Module (K4C)
3. X80L Accessory Power Receptacle - Center Console Rear (D07)
4. X81 Accessory Power Receptacle - 110V AC
5. X82 Audio/Video Input Adapter (U42 with D07)

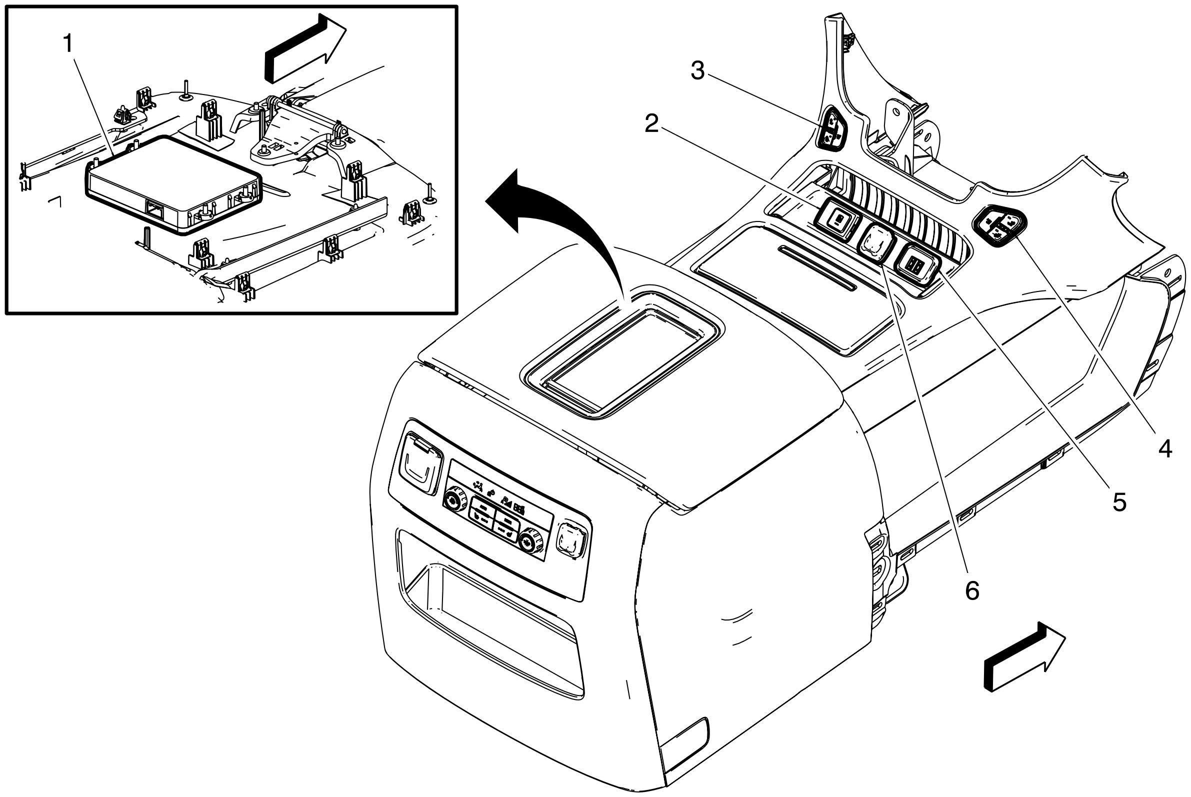
Center Console Rear Component Views (X88/Z88)



Items

1. X81 Accessory Power Receptacle - 110V AC
2. A34 HVAC Controls - Auxiliary
3. X80L Accessory Power Receptacle - Center Console Rear (D07)
4. S5 Center Console Compartment Lamp Switch (D07)
5. T10K Keyless Entry Antenna - Center Console Rear (ATH or BTM)
6. X82 Audio/Video Input Adapter (U42 with D07)

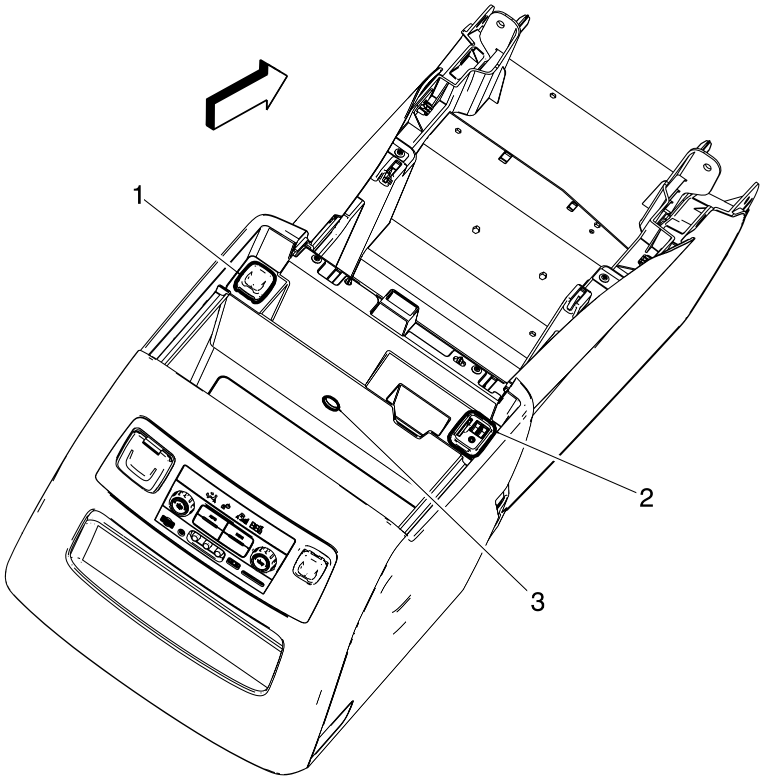
Center Console Top Component Views (X88/Z88)



Items

1. T22 Mobile Device Wireless Charger Module (K4C)
2. S145 Center Console Compartment Cooler Switch (DCK)
3. S31D Seat Heating and Cooling Switch - Driver (KA1 or KB6, without Z75)
4. S31P Seat Heating and Cooling Switch - Passenger (KA1 or KB6, without Z75)
5. X92 USB Receptacle (D07 with IO5 or IO6)
6. X80G Accessory Power Receptacle - Instrument Panel

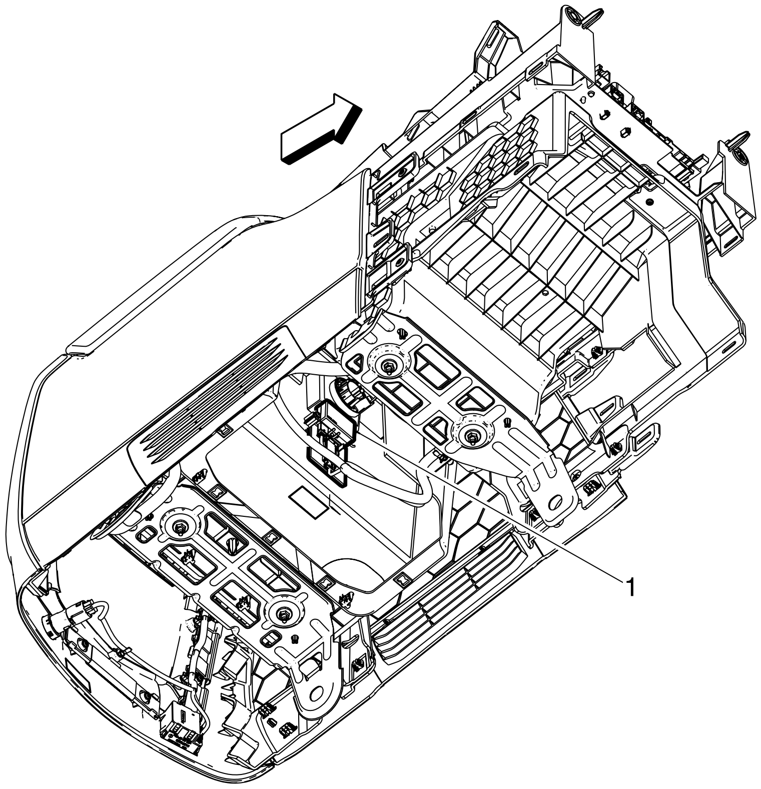
Center Console Internal Component Views (X88/Z88)



Items

1. X80D Accessory Power Receptacle - Center Console Compartment
2. X83 Auxiliary Audio Input
3. E28 Center Console Compartment Lamp (D07 without DCK)

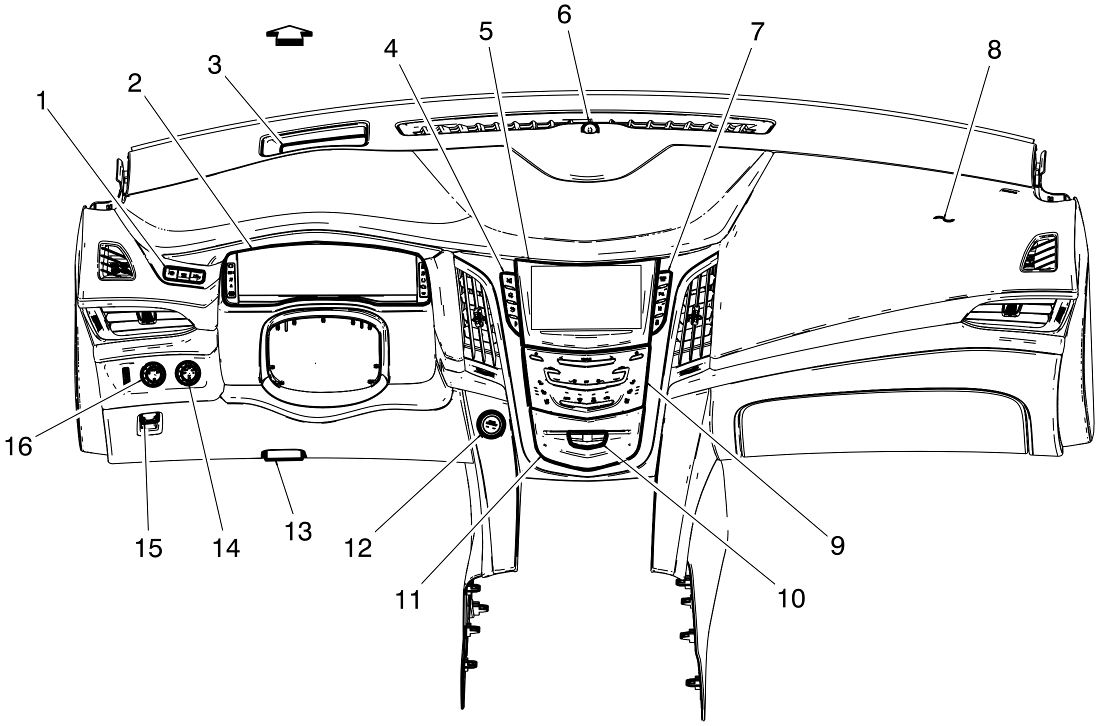
Center Console Bottom Component Views



Items

1. K89 Immobilizer Control Module

Front of Instrument Panel Components (Z75)



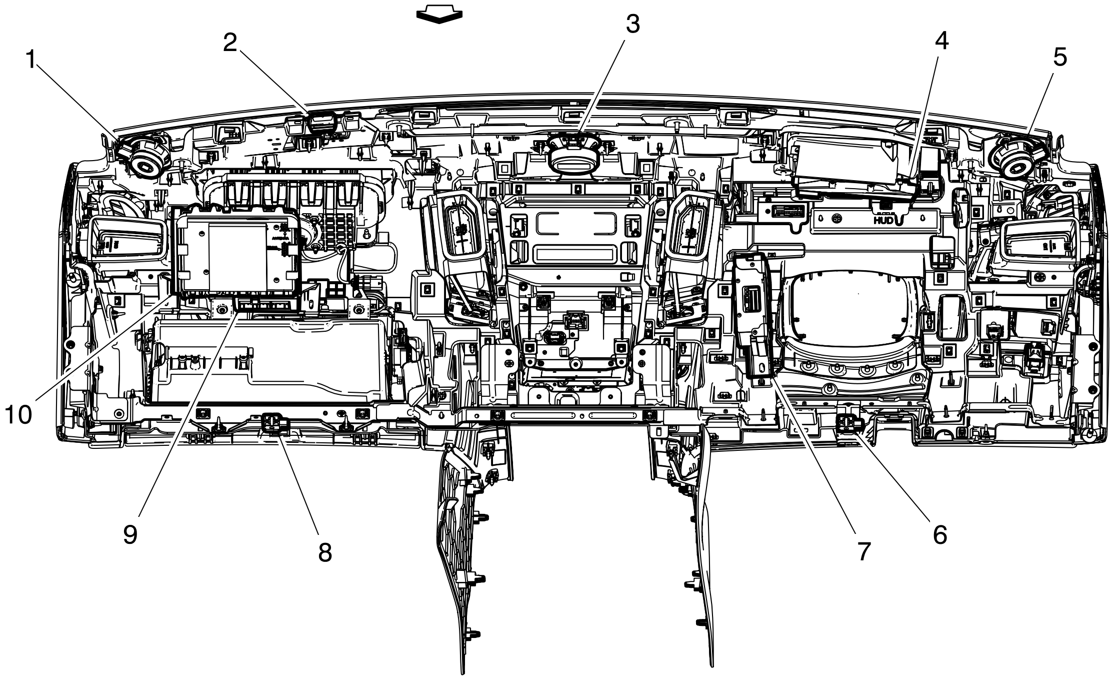
Items

1. S27 Head-Up Display Switch (UV6)
2. P16 Instrument Cluster
3. S27 Head-Up Display Switch (UV6)
4. S48C Multifunction Switch 1 - Instrument Panel (Z75)
5. P17 Info Display Module
6. B10B Ambient Light/Sunload Sensor
7. S48D Multifunction Switch 2 - Instrument Panel (Z75)
8. F101 Passenger Instrument Panel Air Bag
9. A26 HVAC Controls (X88 or Z88)
10. S140 Media Disc Eject Switch (Z75)
11. A33 Media Disc Player (TG5 or U42)
12. S38 Ignition Mode Switch (BTM)
13. X84 Data Link Connector
14. S77 Transfer Case Shift Control Switch (NP0 or NQH)
15. S91 Park Brake Control Switch (J71)

15. S34 Park Brake Control Switch (J71)

16. S30 Headlamp Switch

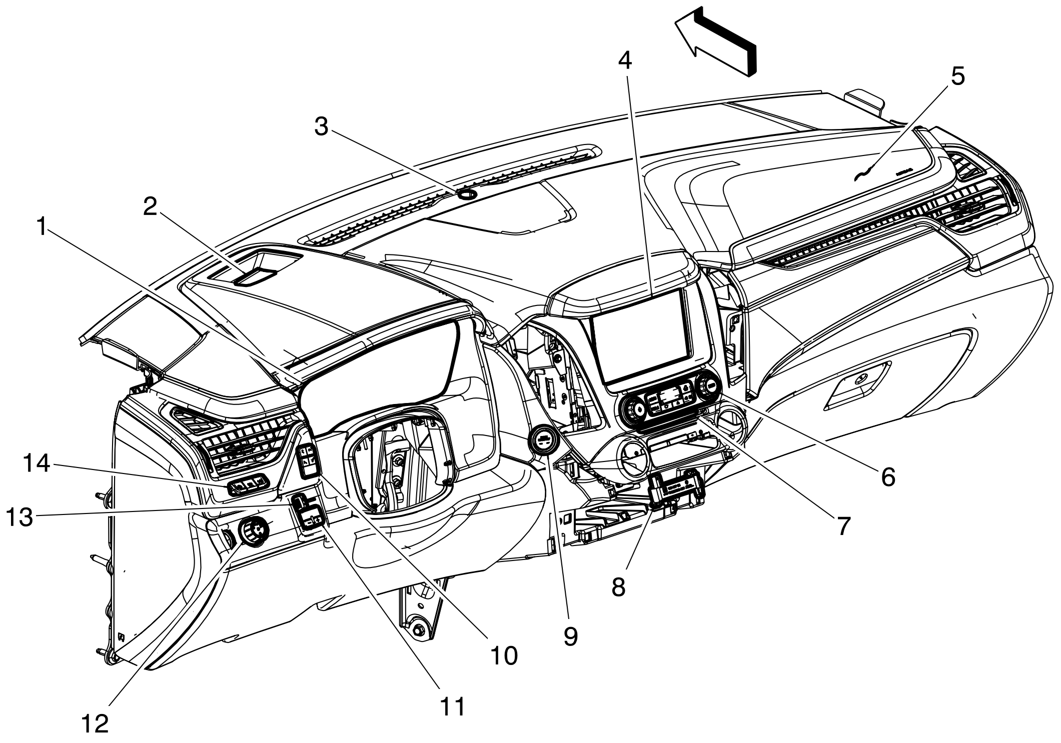
Back of Instrument Panel Components (Z75)



Items

1. P19W Speaker - Right Instrument Panel
2. T15 Navigation Antenna Signal Splitter (IO6 with UE1)
3. P19B Speaker - Center Instrument Panel (UQH or UQS)
4. P29 Head-Up Display (UV6)
5. P19J Speaker - Left Instrument Panel
6. E1AA Floor Accent Lamp - Left Front
7. T1 Accessory DC/AC Power Inverter Module (KI4 or KI5)
8. E1AB Floor Accent Lamp - Right Front
9. K73 Telematics Communication Interface Control Module (UE1)
10. K74 Human Machine Interface Control Module (IO5 or IO6)

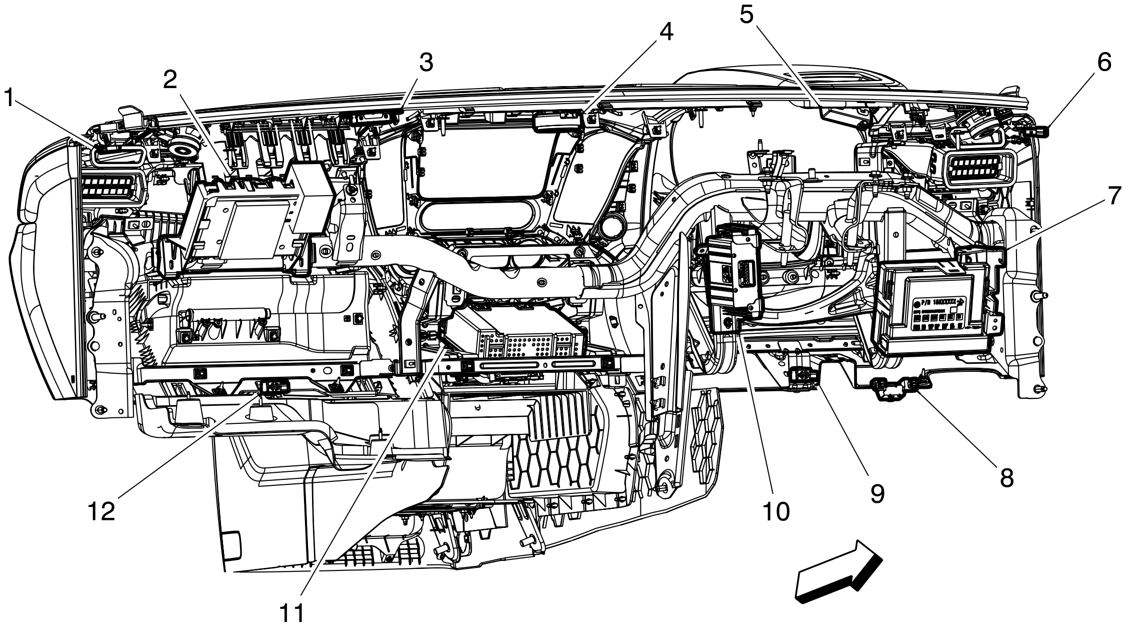
Front of Instrument Panel Components (X88/Z88 with D07/DCK)



Items

1. P16 Instrument Cluster
2. P29 Head-Up Display (UV6)
3. B10B Ambient Light/Sunload Sensor
4. P17 Info Display Module
5. F101 Passenger Instrument Panel Air Bag
6. A22 Radio Controls (X88 or Z88)
7. A33 Media Disc Player (TG5 or U42)
8. T10J Keyless Entry Antenna - Center Console Front (ATH or BTM)
9. S38 Ignition Mode Switch (BTM)
10. S48A Multifunction Switch - Instrument Panel (X88 or Z88)
11. S76 Trailer Brake Control Switch (JL1)
12. S30 Headlamp Switch
13. S77 Transfer Case Shift Control Switch (NP0 or NQH)
14. S27 Head-Up Display Switch (UV6)

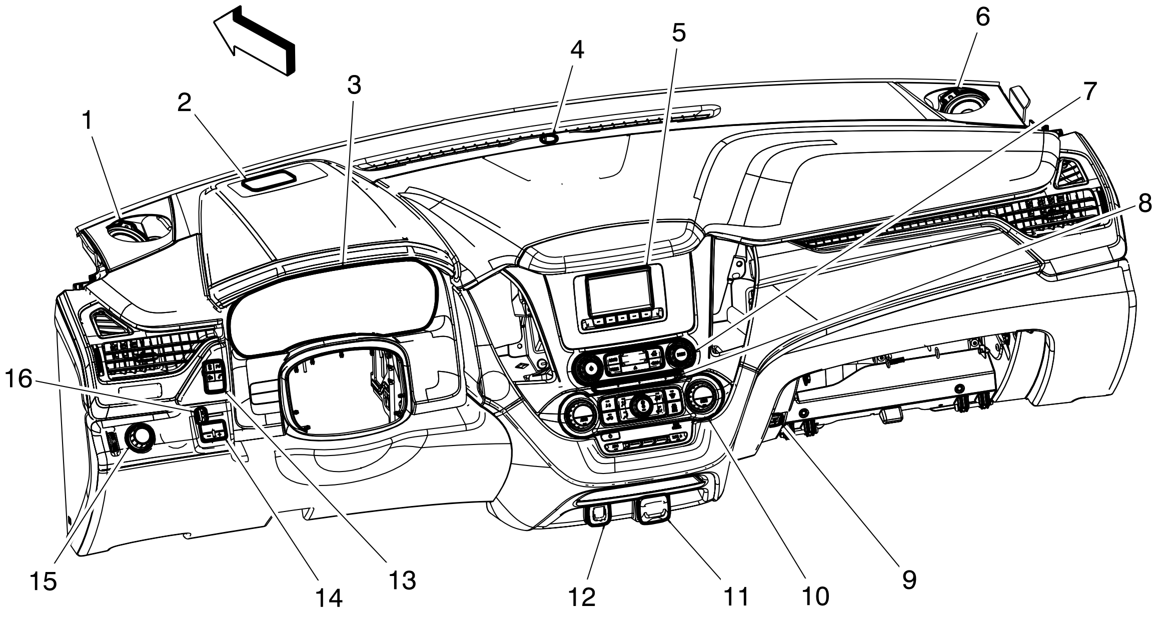
Back of Instrument Panel Components (X88/Z88 with D07/DCK)



Items

1. E35R Exterior Spot Lamp - Right (7X7)
2. K74 Human Machine Interface Control Module (IO5 or IO6)
3. T15 Navigation Antenna Signal Splitter (IO6 with UE1)
4. P19B Speaker - Center Instrument Panel (UQH or UQS)
5. P43 Collision Alert Indicators (UEU, UFL or UHX without UV6)
6. E35L Exterior Spot Lamp - Left (7X6 or 7X7)
7. K9 Body Control Module
8. X84 Data Link Connector
9. E1AA Floor Accent Lamp - Left Front
10. T1 Accessory DC/AC Power Inverter Module (KI4 or KI5)
11. A11 Radio
12. E1AB Floor Accent Lamp - Right Front

Front of Instrument Panel Components (X88/Z88 without D07/DCK)



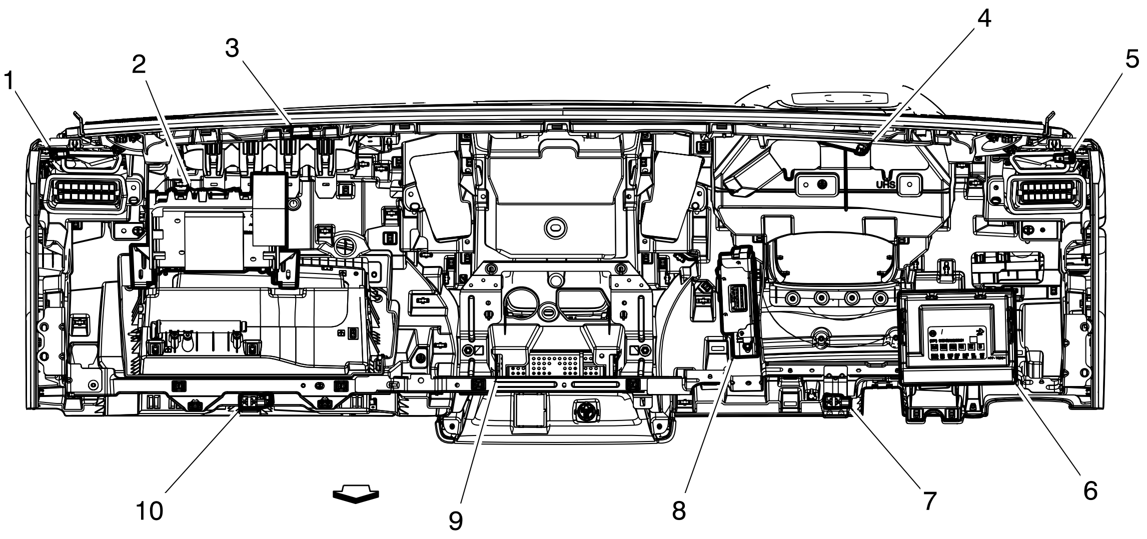
Items

1. P19J Speaker - Left Instrument Panel
2. P29 Head-Up Display (UV6)
3. P16 Instrument Cluster
4. B10B Ambient Light/Sunload Sensor
5. P17 Info Display Module
6. P19W Speaker - Right Instrument Panel
7. A11 Radio
8. A33 Media Disc Player (TG5 or U42)
9. S135 Rollover Protection Disable Switch (C9I)
10. A26 HVAC Controls (X88 or Z88)
11. X81 Accessory Power Receptacle - 110V AC
12. X80G Accessory Power Receptacle - Instrument Panel
13. S48A Multifunction Switch - Instrument Panel (X88 or Z88)
14. S76 Trailer Brake Control Switch (JL1)
15. S30 Headlamp Switch

15. S30 Headlamp Switch

16. S77 Transfer Case Shift Control Switch (NP0 or NQH)

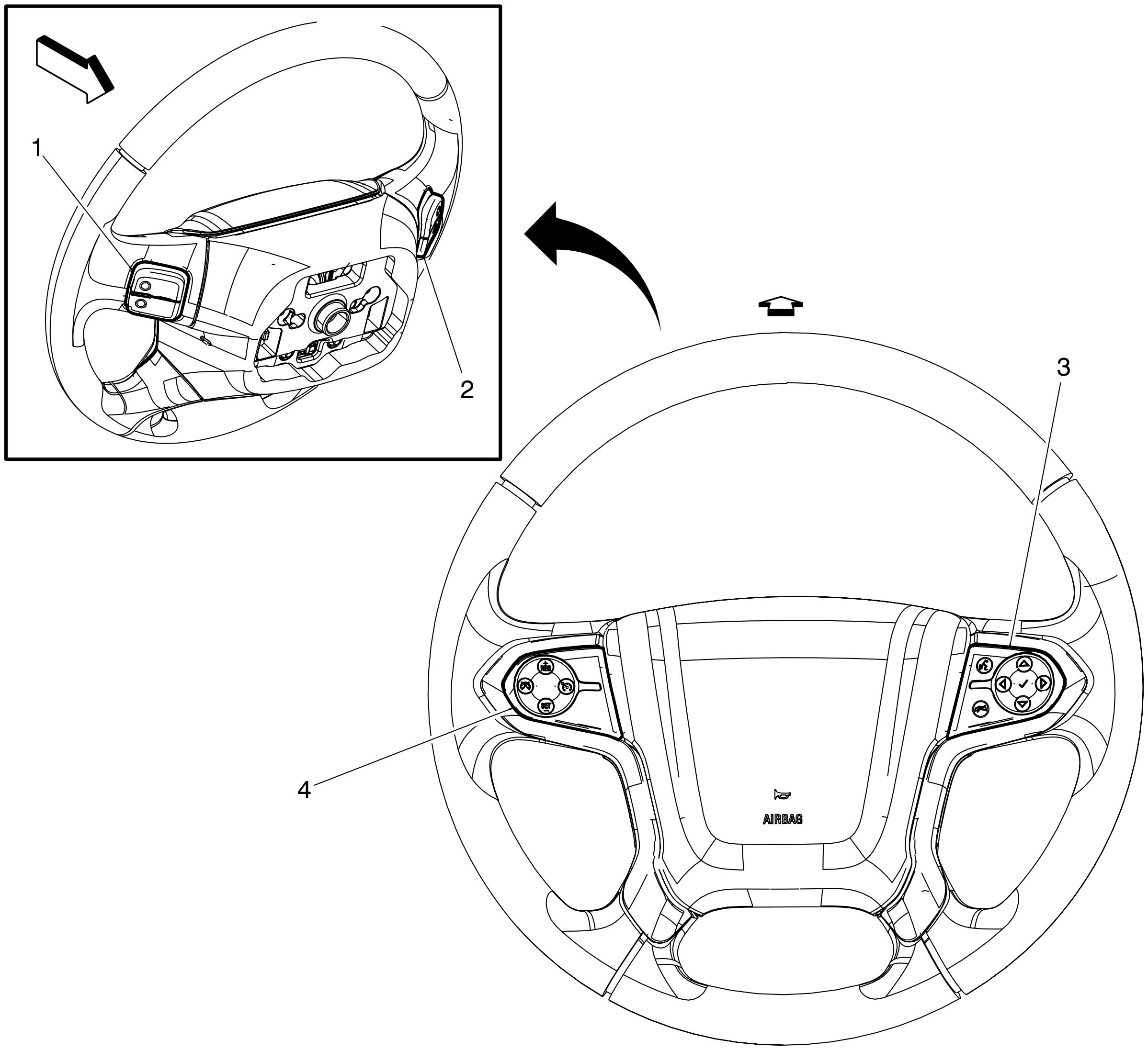
Back of Instrument Panel Components (X88/Z88 without D07/DCK)



Items

1. E35R Exterior Spot Lamp - Right (7X7)
2. K74 Human Machine Interface Control Module (IO5 or IO6)
3. T15 Navigation Antenna Signal Splitter (IO6 with UE1)
4. P43 Collision Alert Indicators (UEU, UFL or UHX without UV6)
5. E35L Exterior Spot Lamp - Left (7X6 or 7X7)
6. K9 Body Control Module
7. E1AA Floor Accent Lamp - Left Front
8. T1 Accessory DC/AC Power Inverter Module (KI4 or KI5)
9. A11 Radio
10. E1AB Floor Accent Lamp - Right Front

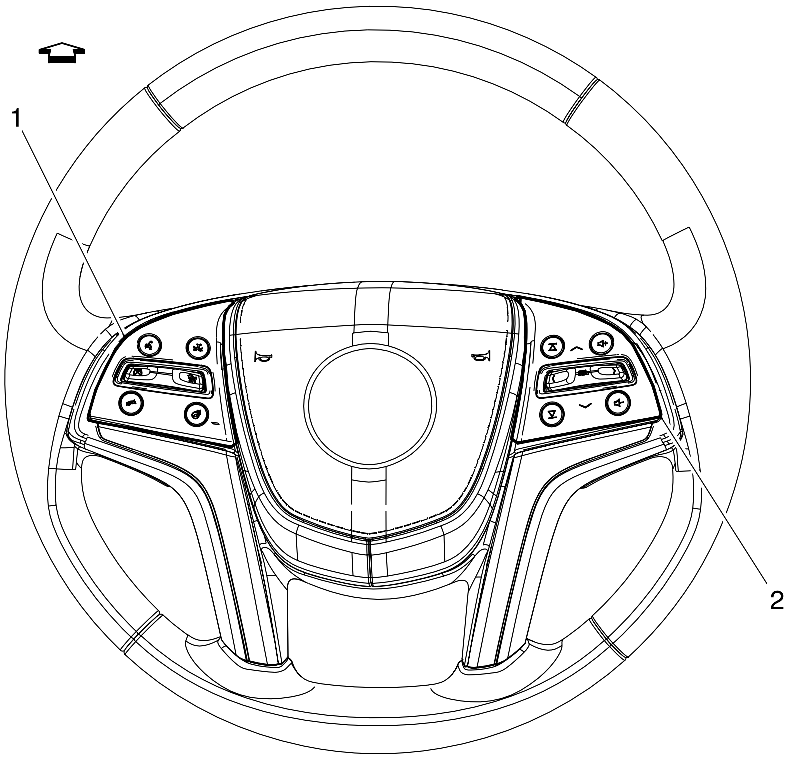
Steering Wheel Components (X88 or Z88)



Items

1. S70F Steering Wheel Controls Switch - Radio Volume (X88 or Z88 with UK3)
2. S70E Steering Wheel Controls Switch - Radio Presets (X88 or Z88 with UK3)
3. S70R Steering Wheel Controls Switch - Right
4. S70L Steering Wheel Controls Switch - Left

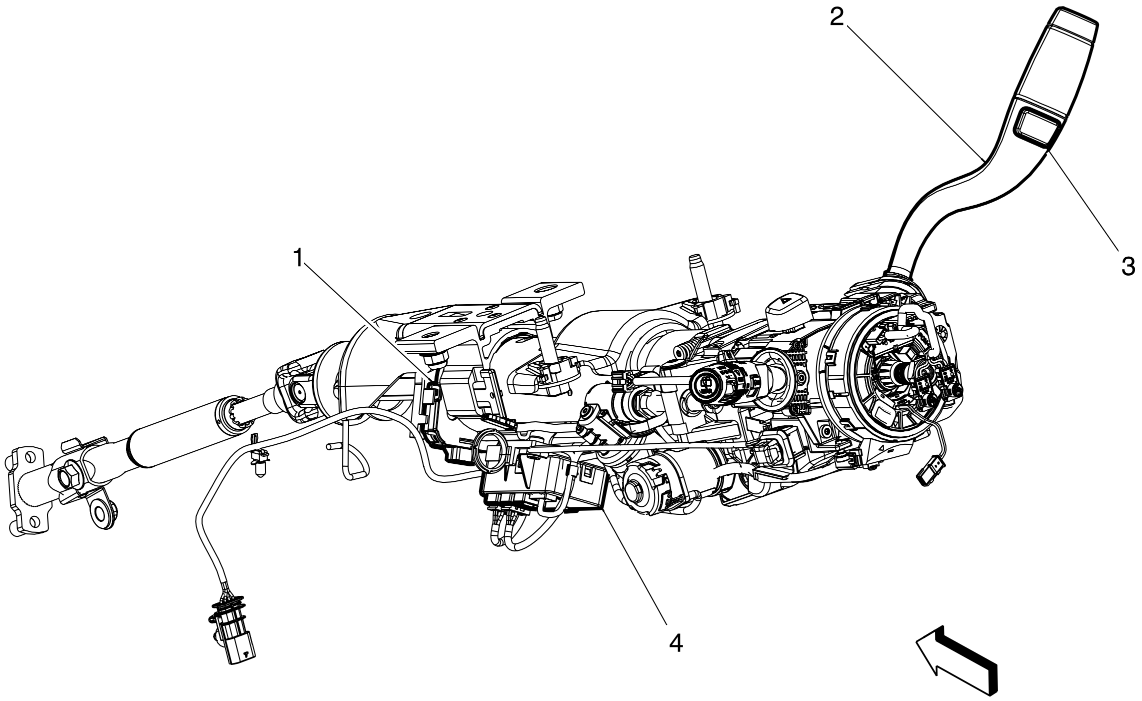
Steering Wheel Components (Z75)



Items

1. S70L Steering Wheel Controls Switch - Left
2. S70R Steering Wheel Controls Switch - Right

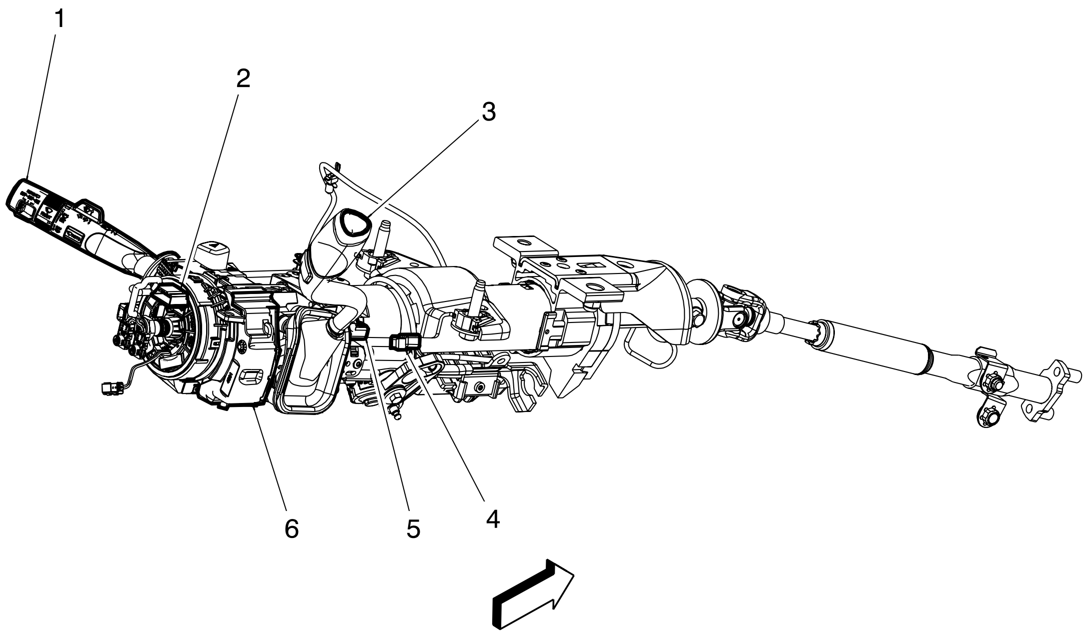
Steering Column Components (1 of 2)



Items

1. B99 Steering Wheel Angle Sensor
2. S3 Transmission Shift Lever
3. S2A Transmission Manual Shift Switch - Up/Down (KB7)
4. K99 Steering Column Position Control Module (N38)

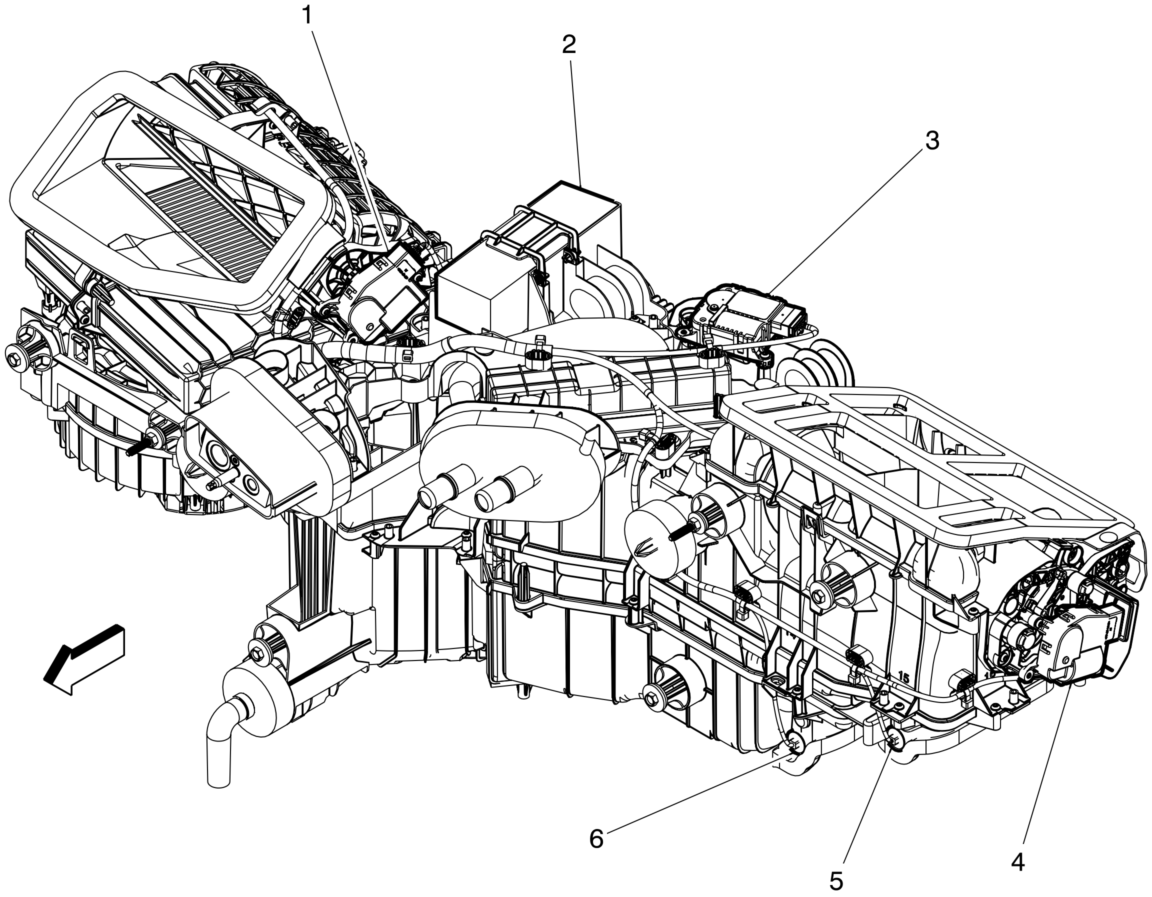
Steering Column Components (2 of 2)



Items

1. S78 Turn Signal/Multifunction Switch
2. X85 Steering Wheel Air Bag Coil
3. S74 Tow/Haul Mode Switch
4. M7 Transmission Shift Lock Control Solenoid Actuator
5. B81B Park Position Switch
6. K60 Steering Column Lock Module (BTM)

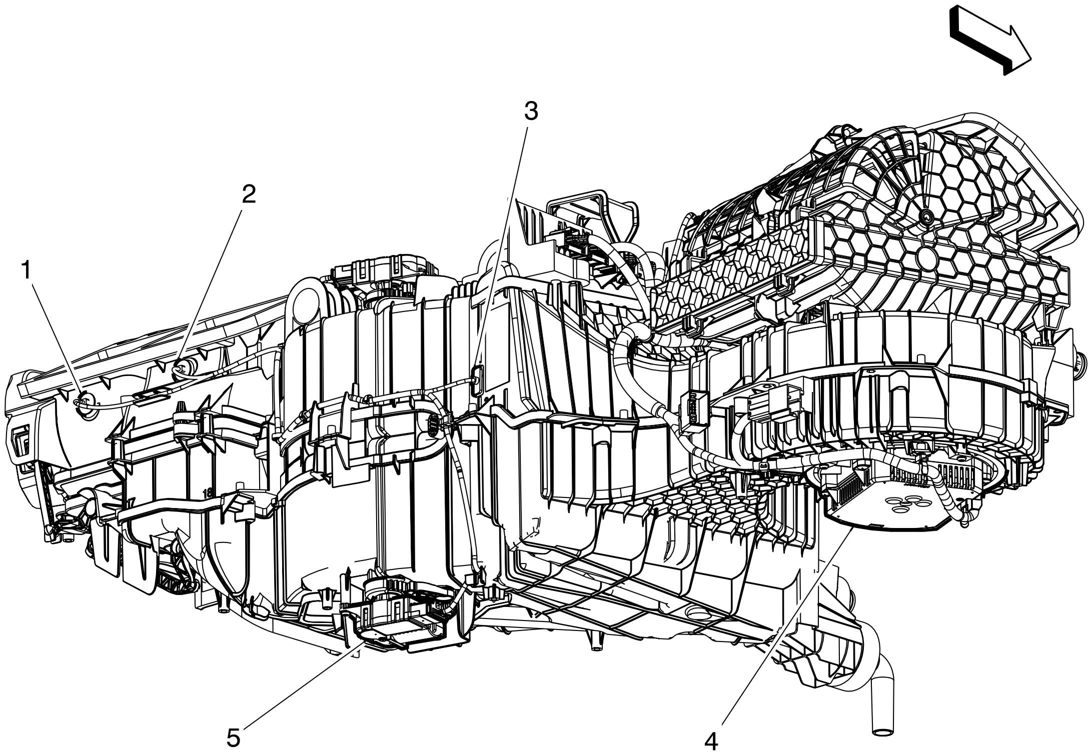
Front of HVAC Assembly Components



Items

1. M4 Air Inlet Door Actuator
2. K33 HVAC Control Module
3. M6L Air Temperature Door Actuator - Left
4. M37L Mode Door Actuator - Left
5. B7D Air Temperature Sensor - Duct Left Lower
6. B7E Air Temperature Sensor - Duct Right Lower

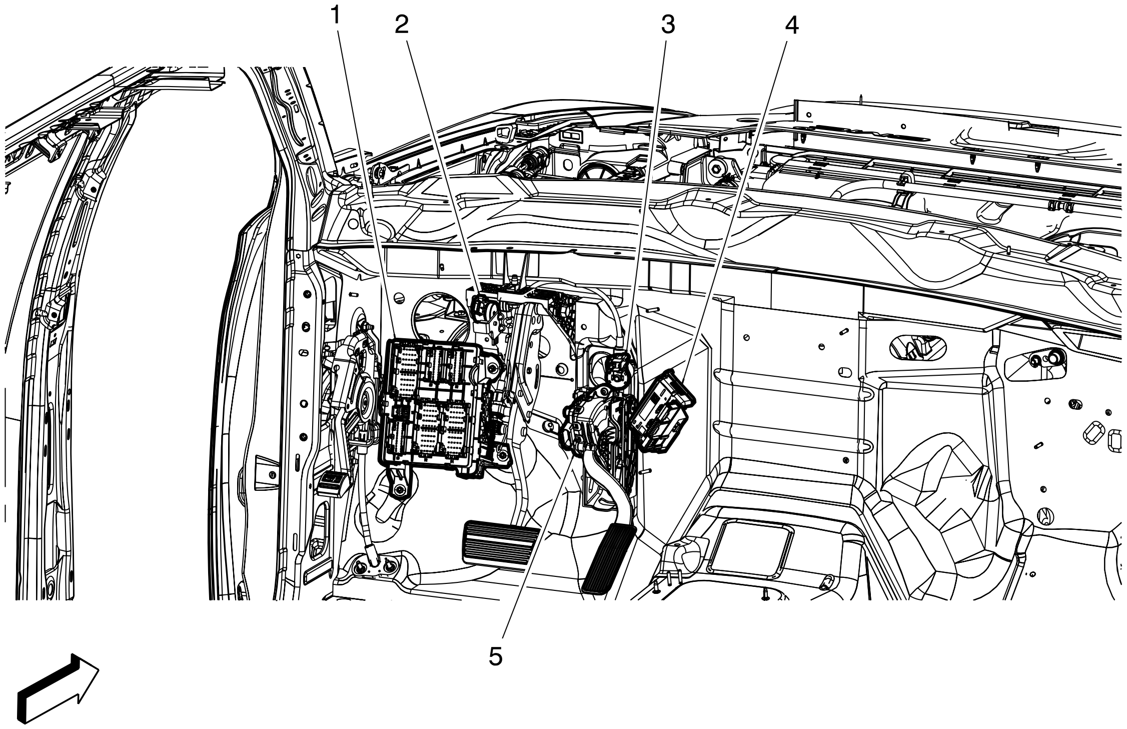
Back of HVAC Assembly Components



Items

1. B7H Air Temperature Sensor - Duct Left Upper
2. B7J Air Temperature Sensor - Duct Right Upper
3. B39 A/C Evaporator Temperature Sensor
4. M8 Blower Motor
5. M6R Air Temperature Door Actuator - Right

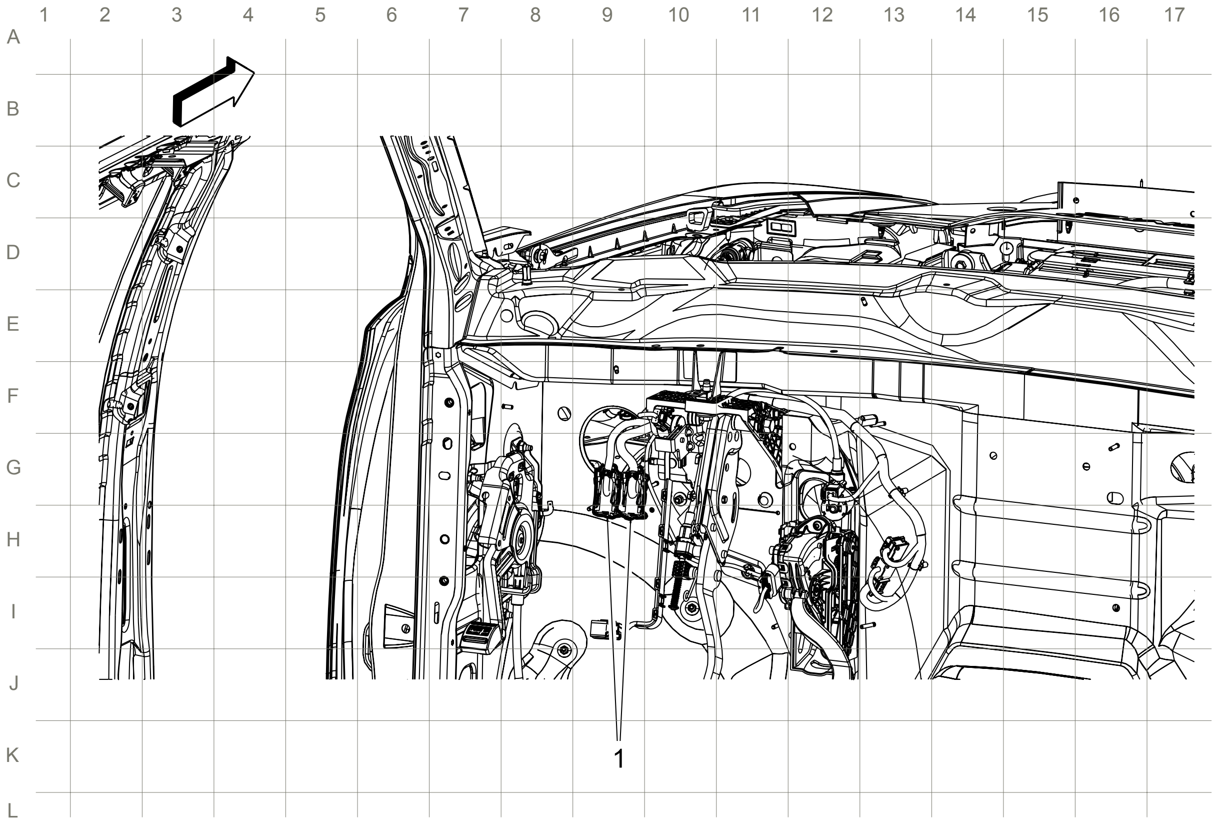
Behind Left Side of Instrument Panel Components (1 of 2)



Items

1. X61A Junction Block - Instrument Panel
2. B22 Brake Pedal Position Sensor
3. M5 Adjustable Pedal Motor (JF4)
4. K69 Transfer Case Control Module (NP0 or NQH)
5. B107 Accelerator Pedal Position Sensor

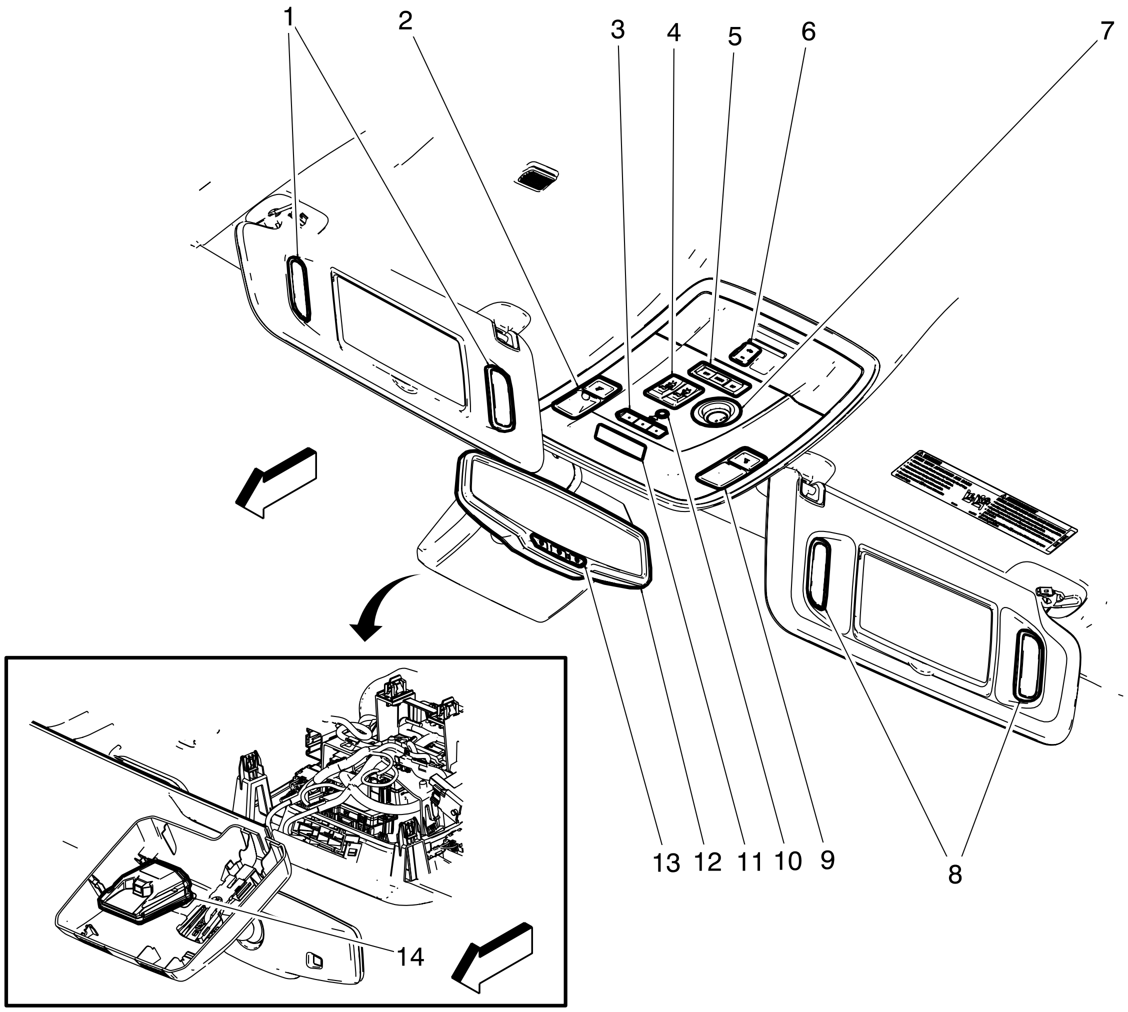
Behind Left Side of Instrument Panel Components (2 of 2)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
K
L
1

Items

1. X61A Junction Block - Instrument Panel

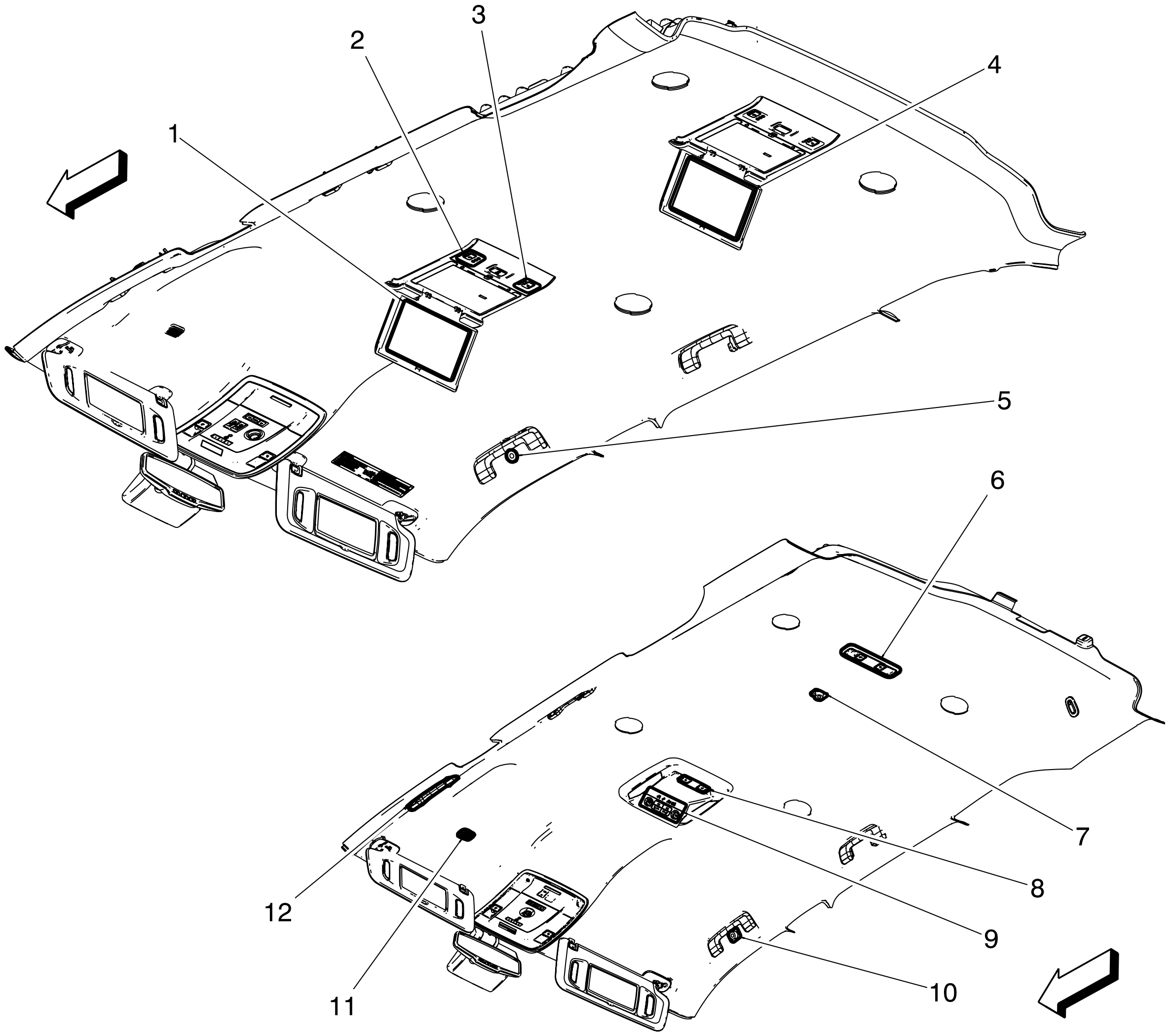
Overhead Console Components



Items

1. E31L Sunshade Mirror Lamp - Left
2. E37EL Dome/Reading Lamps - Front Overhead Console Left
3. S25 Garage Door Opener (UG1)
4. S72 Sunroof Switch (CF5)
5. S12 Dome Lamp Switch
6. S43 Content Theft Deterrent Sensor Disable Switch (UTT)
7. S45B Liftgate Control Switch - Interior (TB5 or TC2)
8. E31R Sunshade Mirror Lamp - Right
9. E37ER Dome/Reading Lamps - Front Overhead Console Right
10. E38 Flood Lamp - Center Console
11. P14 Passenger Air Bag Disabled Indicator

11. P14 Passenger Air Bag Disabled Indicator
12. A10 Inside Rearview Mirror
13. S51 Telematics Button Assembly (UE1)
14. B174W Frontview Camera - Windshield (UFL, UHX, or UGN)

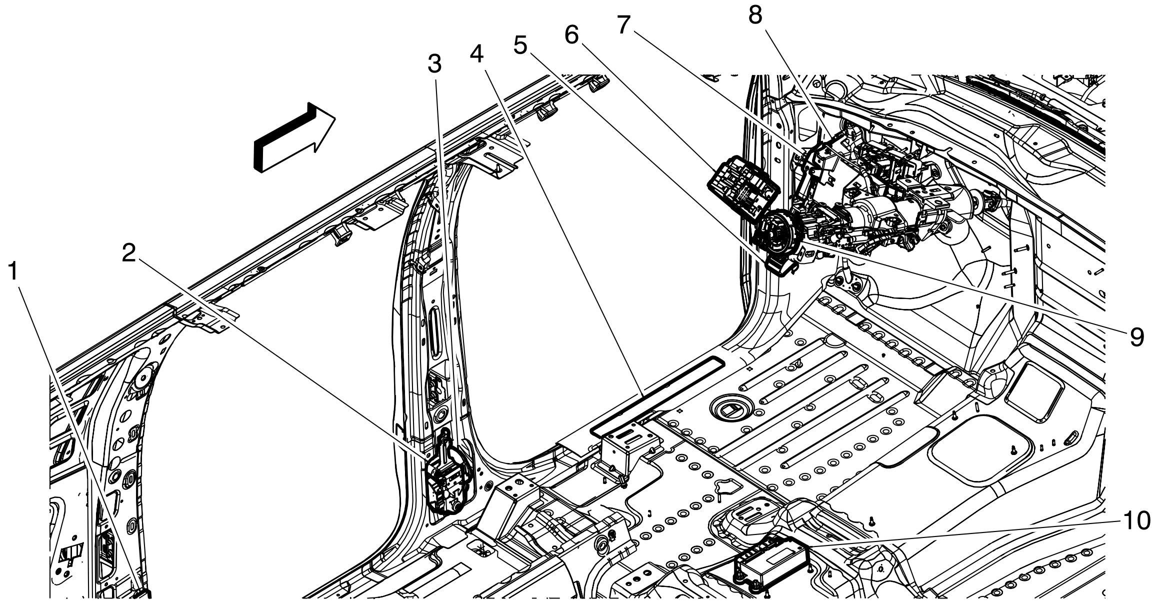


Items

1. P22A Video Display - 2nd Row (U42)
2. E37H Dome/Reading Lamps - Left Roof Rail (U42)
3. E37J Dome/Reading Lamps - Right Roof Rail (U42)
4. P22B Video Display - 3rd Row (DNU)
5. B77RF Radio Volume Compensator Interior Noise Microphone - Right Front (NKC)
6. E37C Dome/Reading Lamps - 3rd Row
7. B77R Radio Volume Compensator Interior Noise Microphone - Rear (NKC)
8. E37B Dome/Reading Lamps - 2nd Row
9. A34 HVAC Controls - Auxiliary
10. B77RF Radio Volume Compensator Interior Noise Microphone - Right Front (NKC)
11. B24 Cellular Phone Microphone

11. B24 Cellular Phone Microphone
12. B77LF Radio Volume Compensator Interior Noise Microphone - Left Front (NKC)

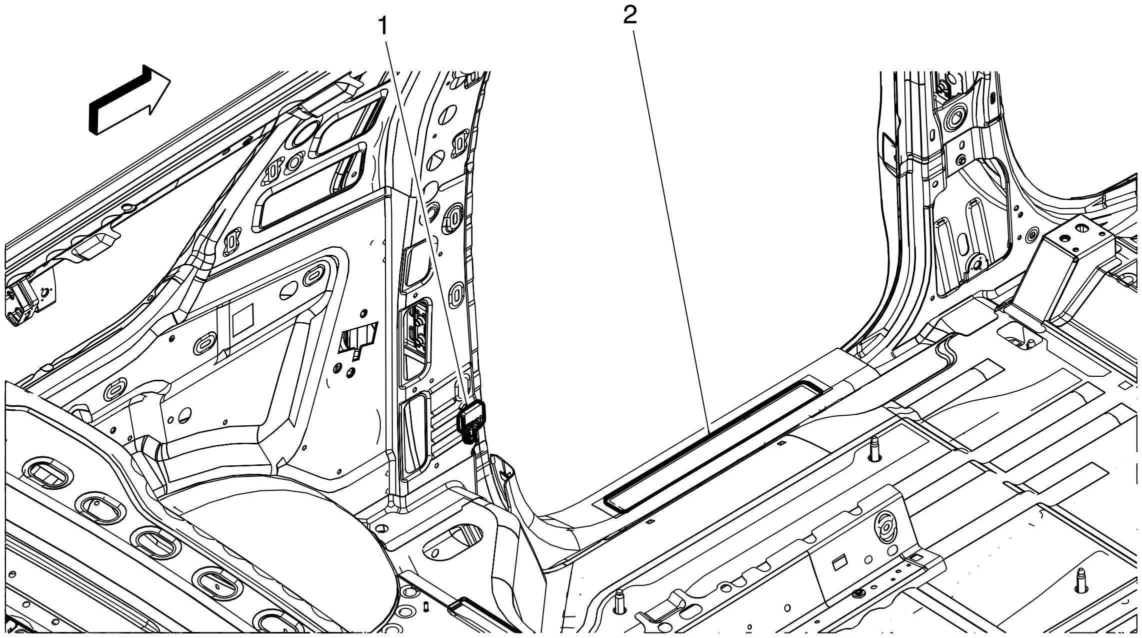
Left Front of Passenger Compartment Views (Z75)



Items

1. B63LR Side Impact Sensor - Left Rear
2. F112D Seat Belt Retractor Pretensioner - Driver
3. M101L Seat Belt Retractor Motor Module - Left (AX7)
4. E8A Door Sill Plate Lamp - Driver (Z75)
5. B80 Park Brake Switch (without J71)
6. X51L Fuse Block - Instrument Panel Left
7. K157 Video Processing Control Module (UVH)
8. K9 Body Control Module
9. X85 Steering Wheel Air Bag Coil
10. K36 Inflatable Restraint Sensing and Diagnostic Module

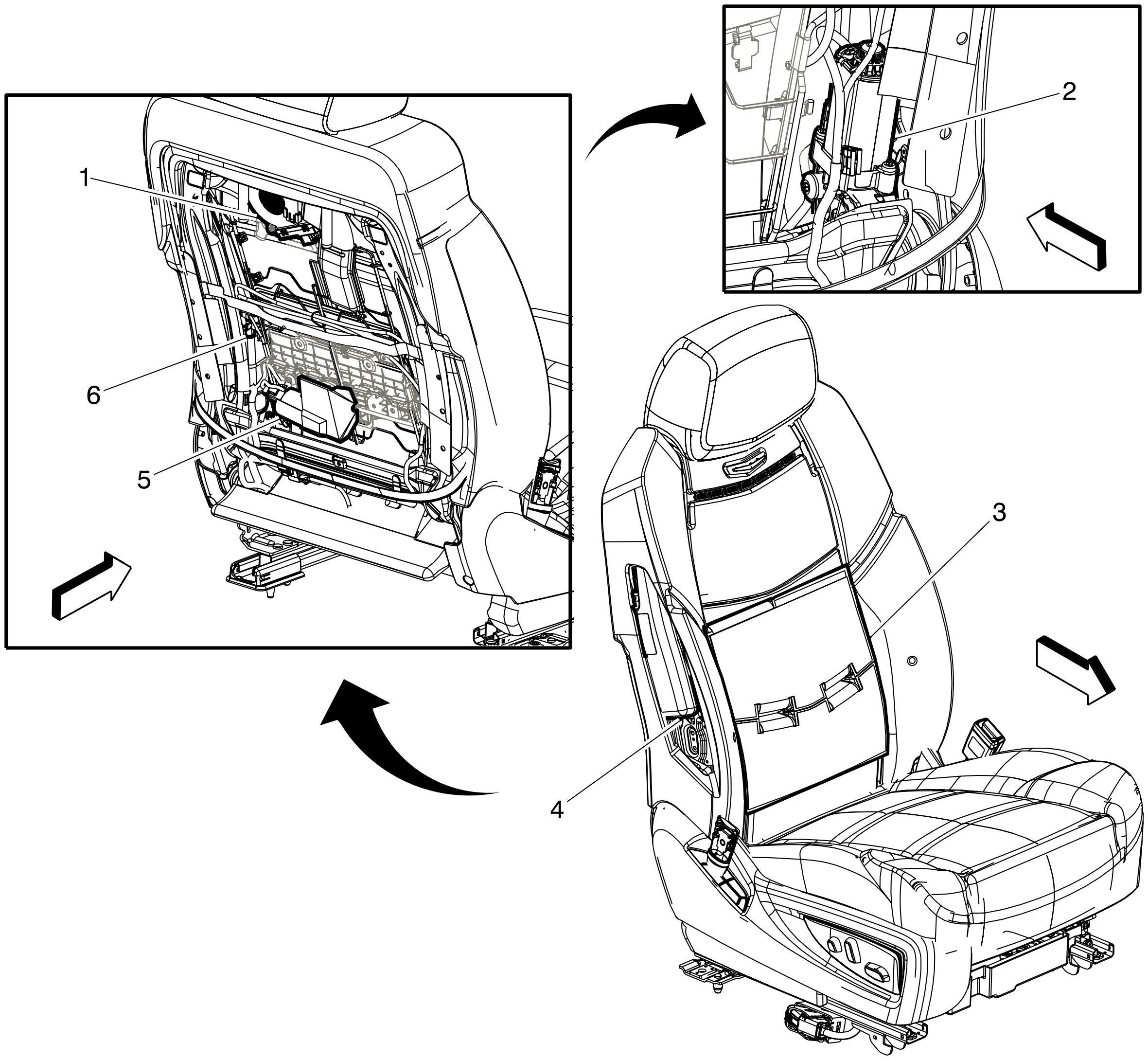
Left Rear of Passenger Compartment Views (Z75)



Items

1. B63LR Side Impact Sensor - Left Rear
2. E8Q Door Sill Plate Lamp - Left Rear (Z75)

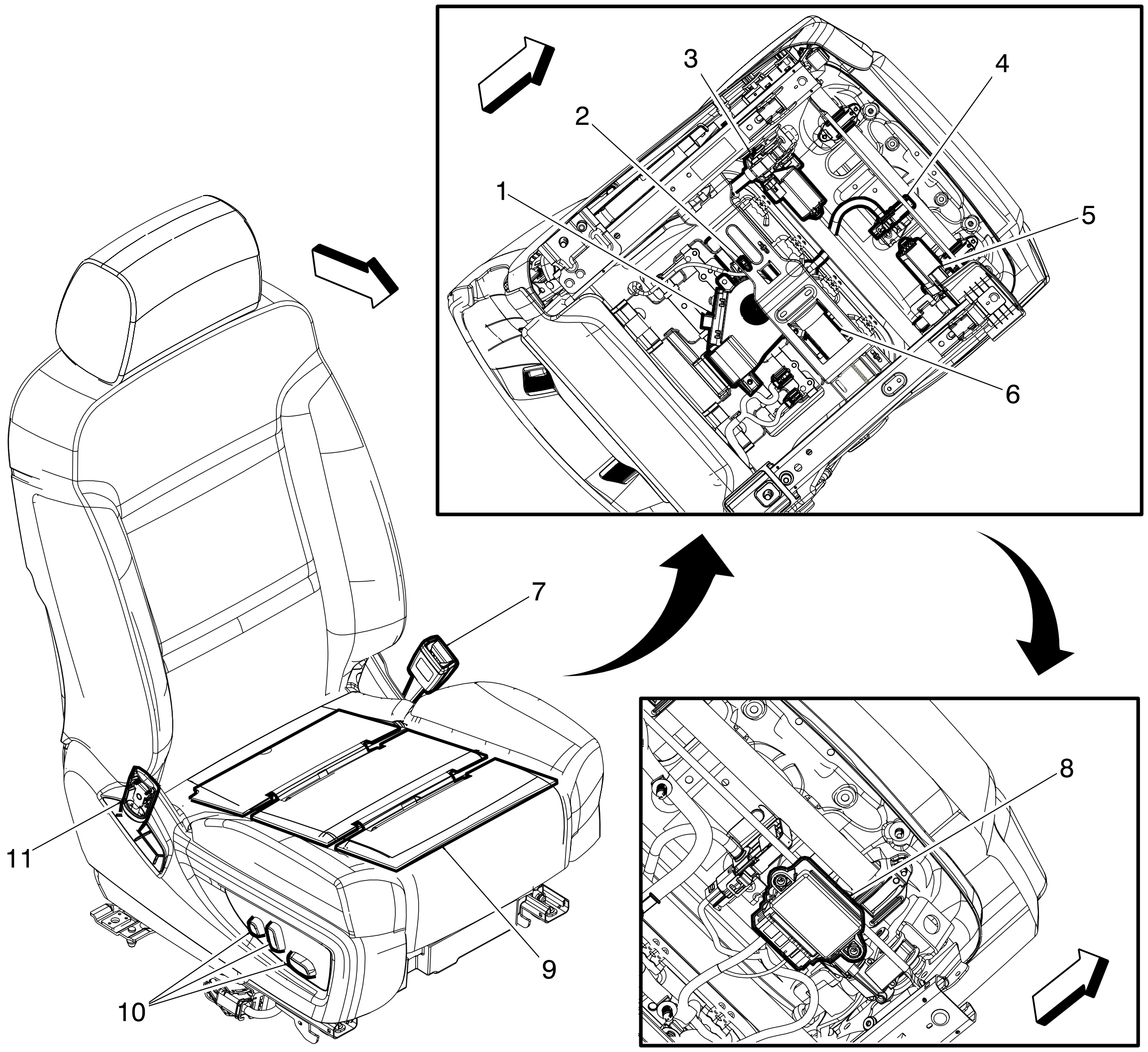
Passenger Seat Components View



Items

1. K53P Seat Blower Assembly - Passenger Back
2. M56P Seat Recline Motor - Passenger
3. E14C Seat Heating Element - Passenger Back (KA1 or KB6)
4. F106P Seat Side Air Bag - Passenger
5. M52P Seat Lumbar Support Horizontal Motor - Passenger (without Y91 or Z75)
6. A14P Seat Lumbar Support Pump - Passenger (Y91 or Z75 without ULT)

Passenger Seat Cushion Components (without ULT)

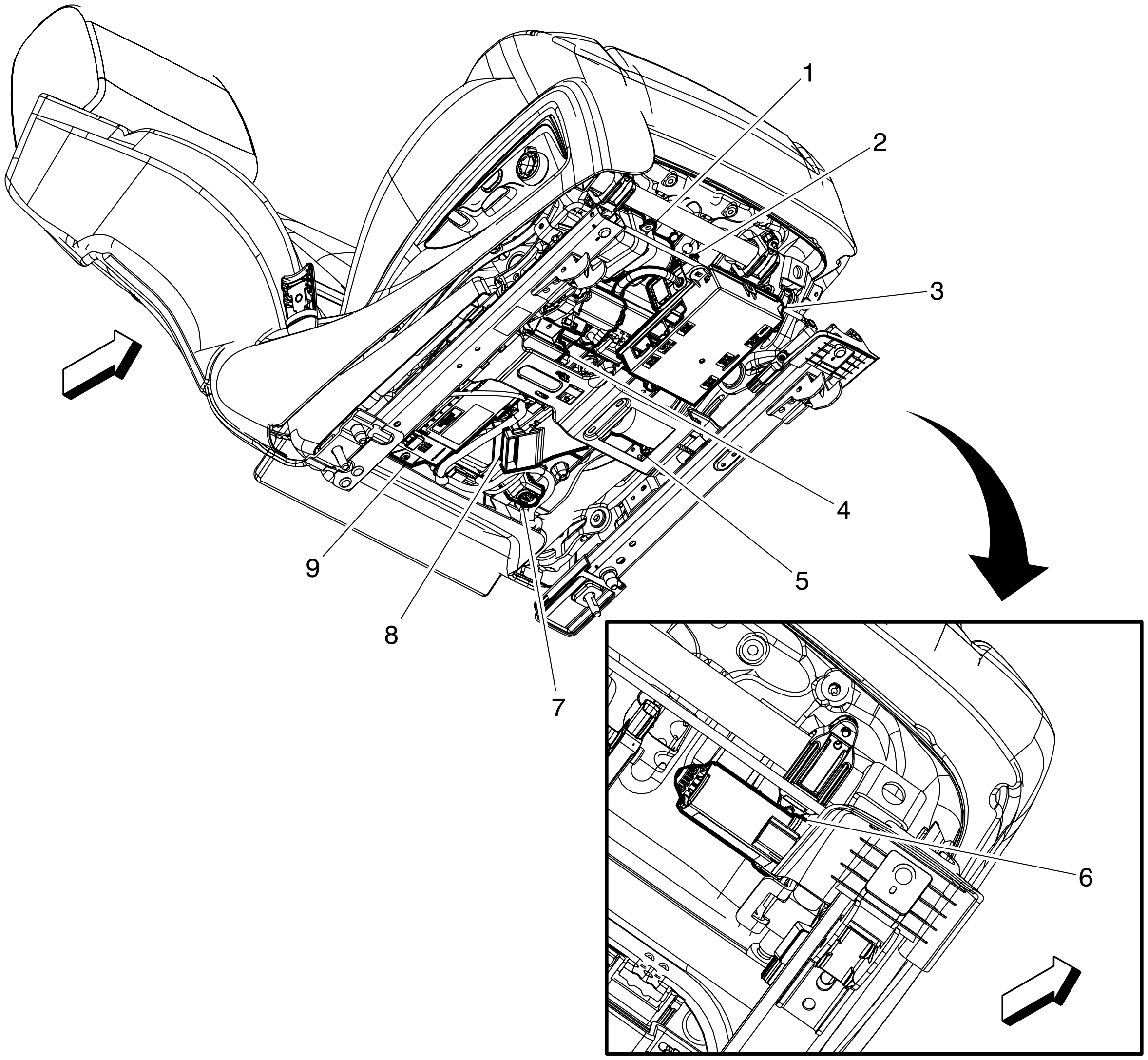


Items

1. K55P Seat Blower Assembly - Passenger Cushion
2. E1B Accent Lamp - Passenger Seat (AN3 or A95)
3. M55P Seat Rear Vertical Motor - Passenger
4. K85 Passenger Presence Module
5. M50P Seat Front Vertical Motor - Passenger
6. M51P Seat Horizontal Motor - Passenger
7. B88P Seat Belt Switch - Passenger
8. K29 Seat Heating Control Module (KA1)
9. E14D Seat Heating Element - Passenger Cushion (KA1 or KB6)
10. S64P Seat Adjuster Switch - Passenger
11. F113P Seat Belt Anchor Pretensioner - Passenger

11. F113P Seat Belt Anchor Pretensioner - Passenger

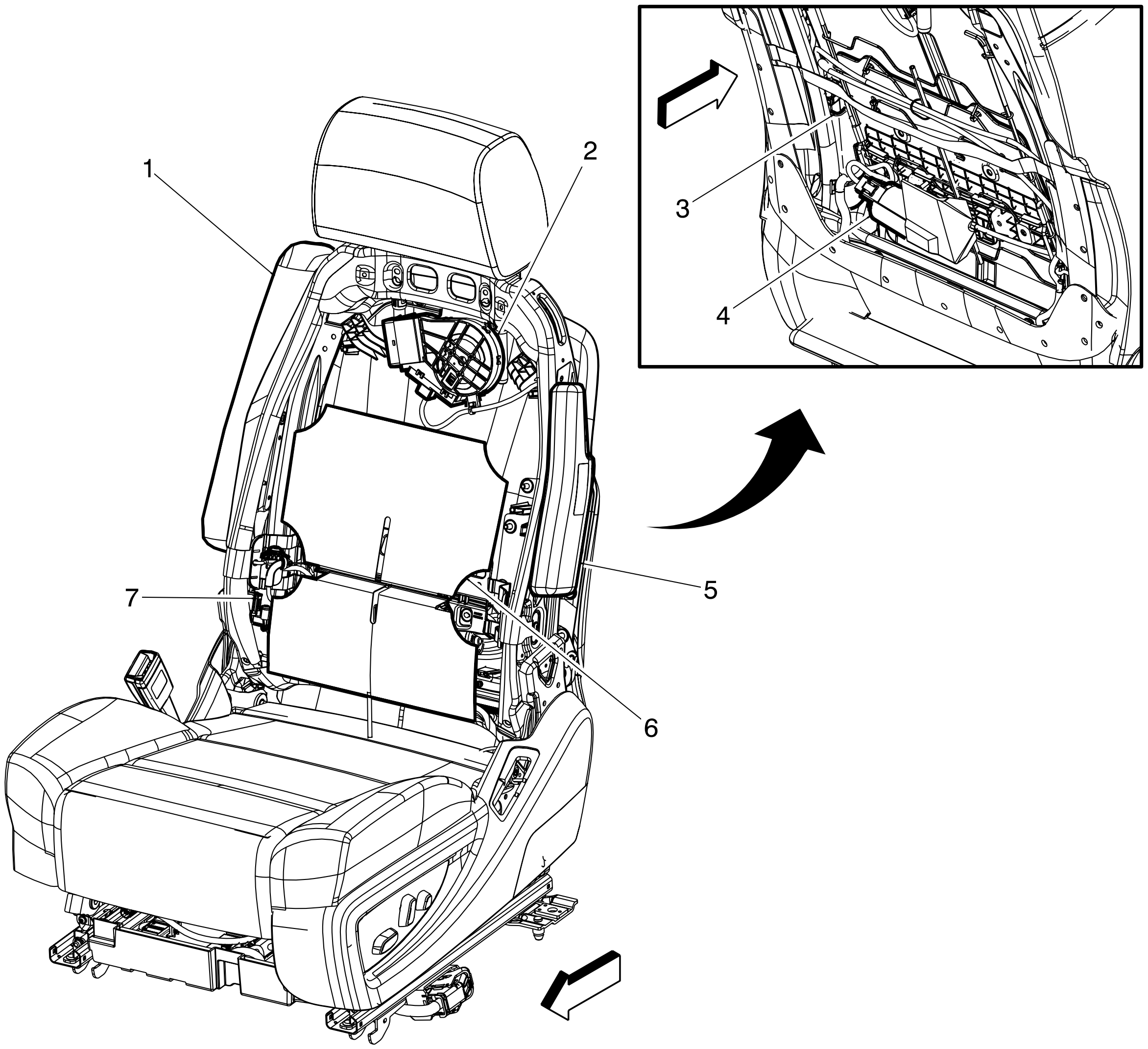
Passenger Seat Cushion Components (ULT)



Items

1. G31P Seat Lumbar/Bolster Pump - Passenger (ULT)
2. K85 Passenger Presence Module
3. K40P Seat Memory Control Module - Passenger (AG2 or ULT)
4. M55P Seat Rear Vertical Motor - Passenger
5. M51P Seat Horizontal Motor - Passenger
6. M55P Seat Rear Vertical Motor - Passenger
7. E1B Accent Lamp - Passenger Seat (AN3 or A95)
8. K55P Seat Blower Assembly - Passenger Cushion
9. K134P Seat Bolster Memory Control Module - Passenger (ULT)

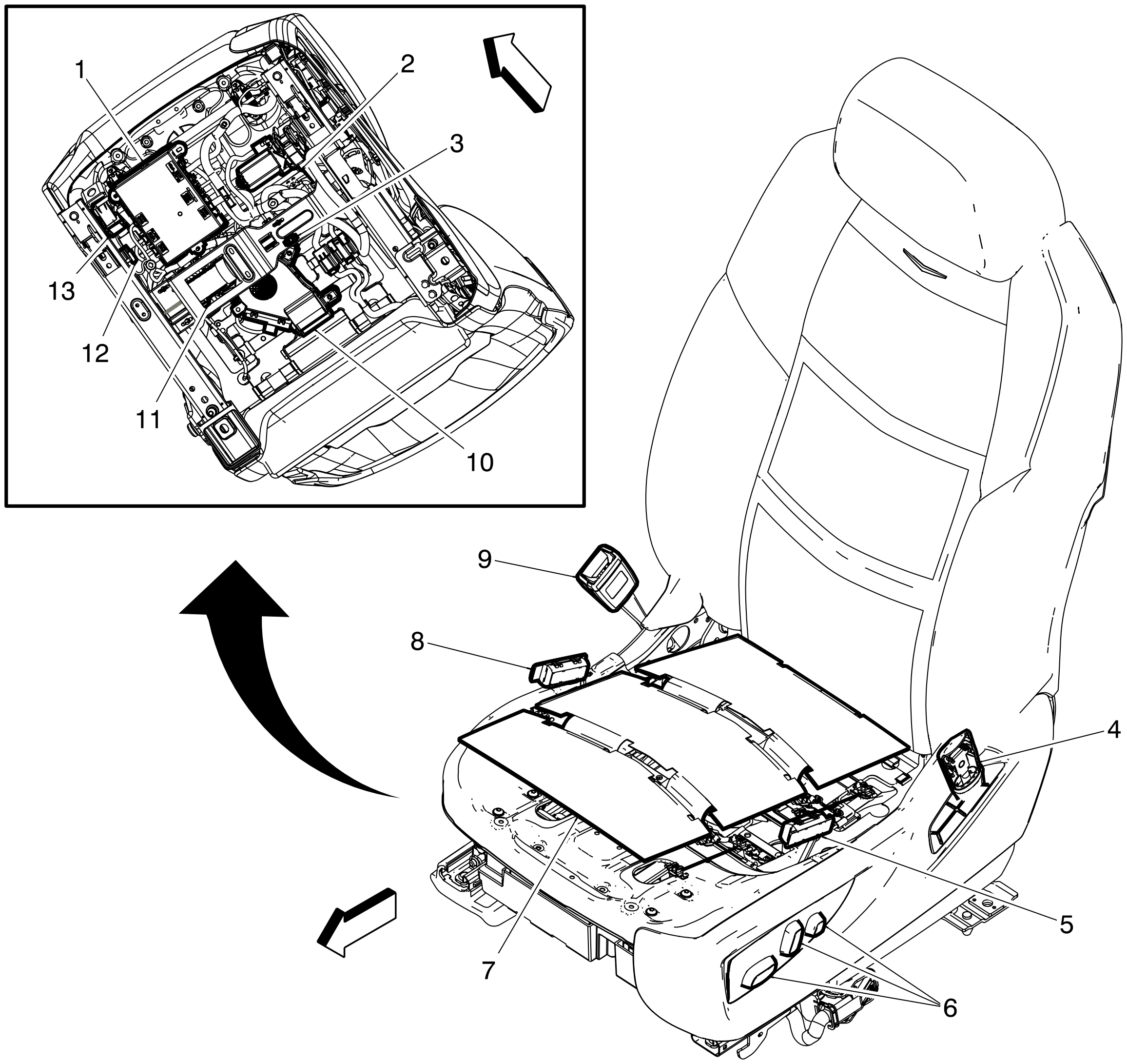
Driver Seat Back Components



Items

1. F106DA Seat Side Air Bag - Driver Inboard (AYQ)
2. K53D Seat Blower Assembly - Driver Back
3. A14D Seat Lumbar Support Pump - Driver (A45, with Y91 or Z75 without ULT)
4. M52D Seat Lumbar Support Horizontal Motor - Driver (without Y91 or Z75)
5. F106D Seat Side Air Bag - Driver
6. E14A Seat Heating Element - Driver Back (KA1 or KB6)
7. M56D Seat Recline Motor - Driver

Driver Seat Cushion Components (without ULT)

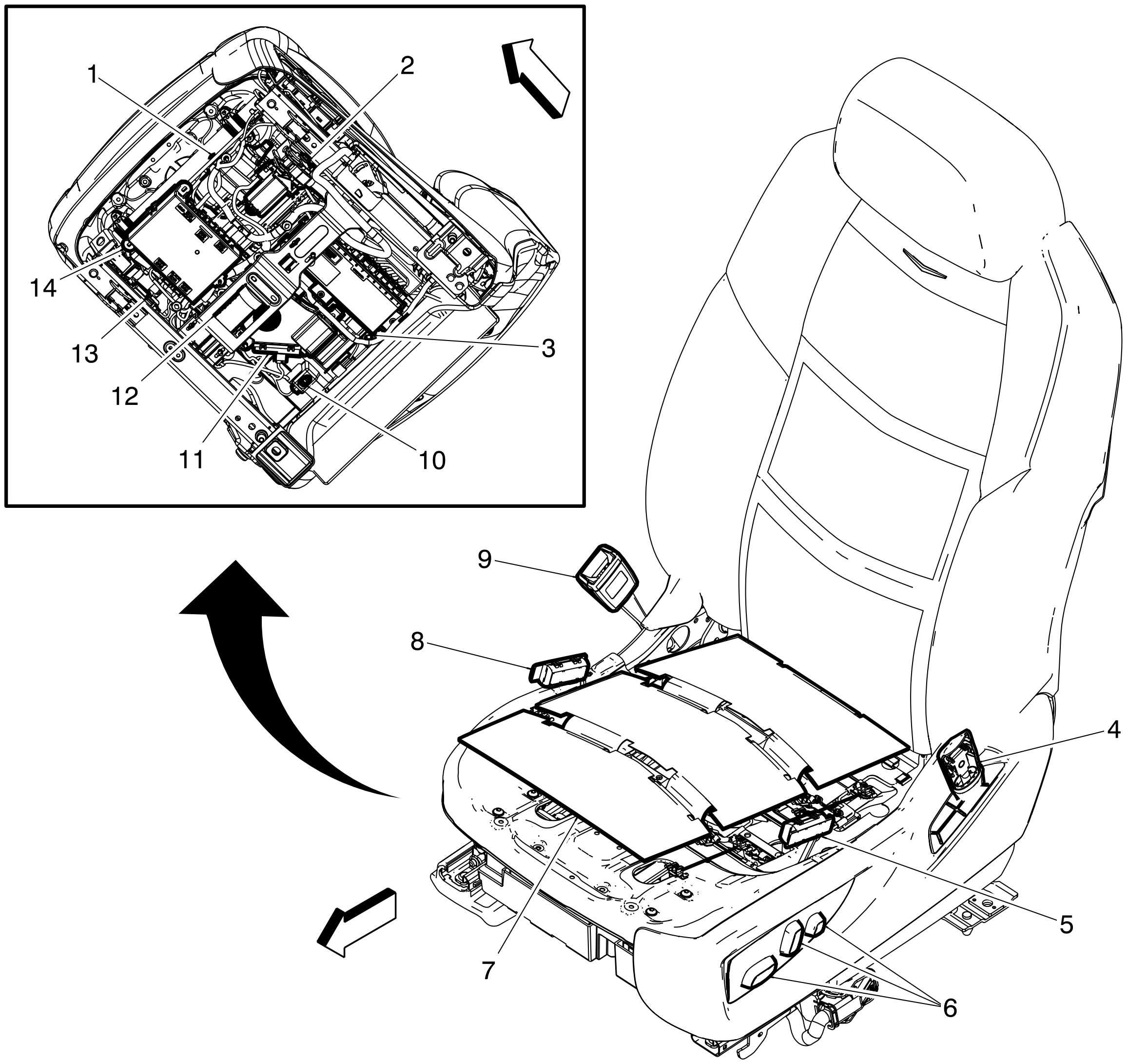


Items

1. K40D Seat Memory Control Module - Driver (A45 or ULT)
2. M55D Seat Rear Vertical Motor - Driver
3. E1A Accent Lamp - Driver Seat (AN3 or A95)
4. F113D Seat Belt Anchor Pretensioner - Driver
5. P45LR Seat Haptic Movement Motor - Driver Left Rear (UEU, UFL UHX, or UGN)
6. S64D Seat Adjuster Switch - Driver
7. E14B Seat Heating Element - Driver Cushion (KA1 or KB6)
8. P45RR Seat Haptic Movement Motor - Driver Right Rear (UEU, UFL UHX, or UGN)
9. B88D Seat Belt Switch - Driver
10. K55D Seat Blower Assembly - Driver Cushion
11. M51D Seat Horizontal Motor - Driver

11. M51D Seat Horizontal Motor - Driver
12. B62D Seat Position Sensor - Driver
13. M50D Seat Front Vertical Motor - Driver

Driver Seat Cushion Components (ULT)

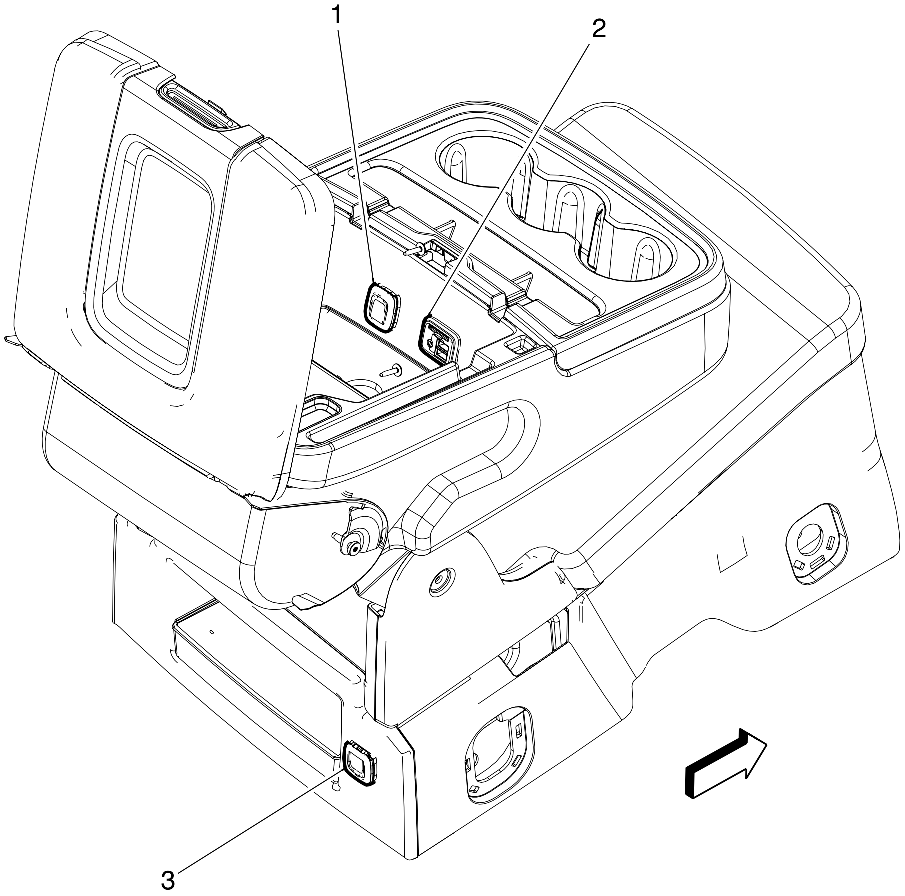


Items

1. G31D Seat Lumbar/Bolster Pump - Driver (ULT)
2. M55D Seat Rear Vertical Motor - Driver
3. K134D Seat Bolster Memory Control Module - Driver (ULT)
4. F113D Seat Belt Anchor Pretensioner - Driver
5. P45LR Seat Haptic Movement Motor - Driver Left Rear (UEU, UFL UHX, or UGN)
6. S64D Seat Adjuster Switch - Driver
7. E14B Seat Heating Element - Driver Cushion (KA1 or KB6)
8. P45RR Seat Haptic Movement Motor - Driver Right Rear (UEU, UFL UHX, or UGN)
9. B88D Seat Belt Switch - Driver
10. E1A Accent Lamp - Driver Seat (AN3 or A95)
11. K55D Seat Blower Assembly - Driver Cushion

11. K55D Seat Blower Assembly - Driver Cushion
12. M51D Seat Horizontal Motor - Driver
13. B62D Seat Position Sensor - Driver
14. K40D Seat Memory Control Module - Driver (A45 or ULT)

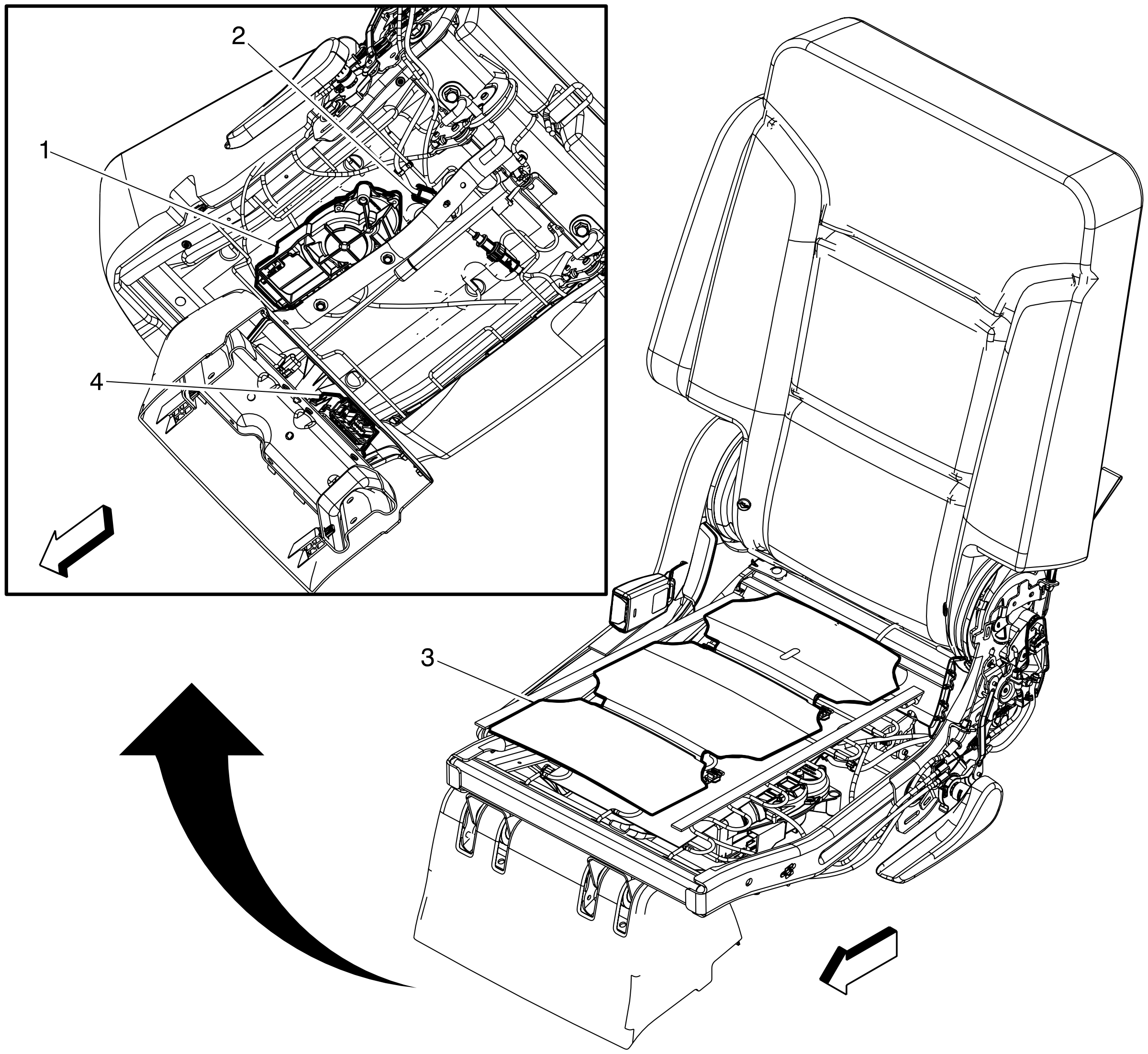
Center Seat Components (AZ3)



Items

1. X80D Accessory Power Receptacle - Center Console Compartment
2. X83 Auxiliary Audio Input
3. X80E Accessory Power Receptacle - Center Seat (AZ3)

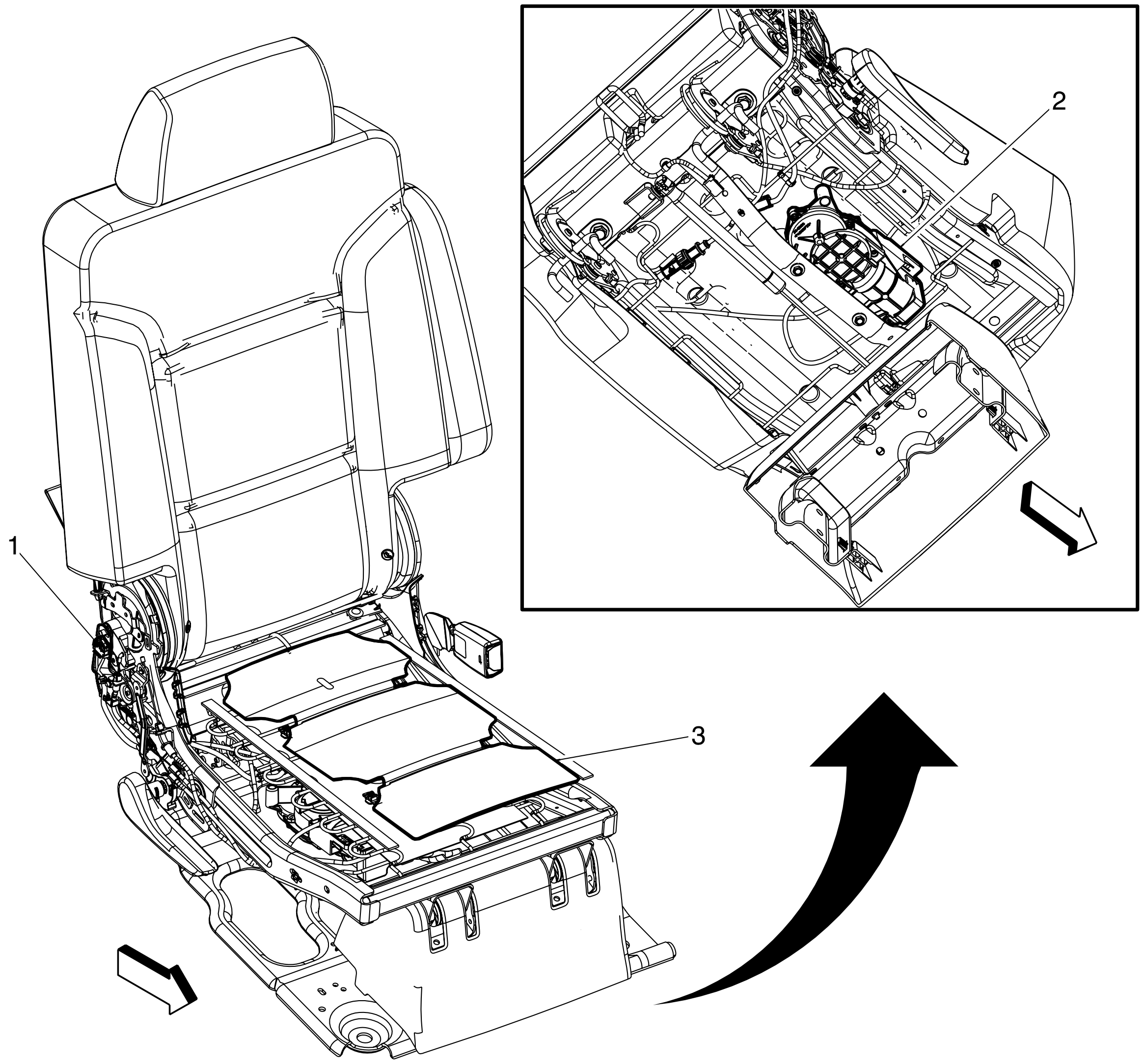
2nd Row Left Bucket Seat Components (ATN)



Items

1. M107LR Folding Seat Motor - 2nd Row Left (ATN or ATT)
2. B124LR Folding Seat Back Position Switch - 2nd Row Left (ATN or ATT)
3. E14F Seat Heating Element - Left Rear Cushion (KA6)
4. K29R Seat Heating Control Module - Rear (KA6)

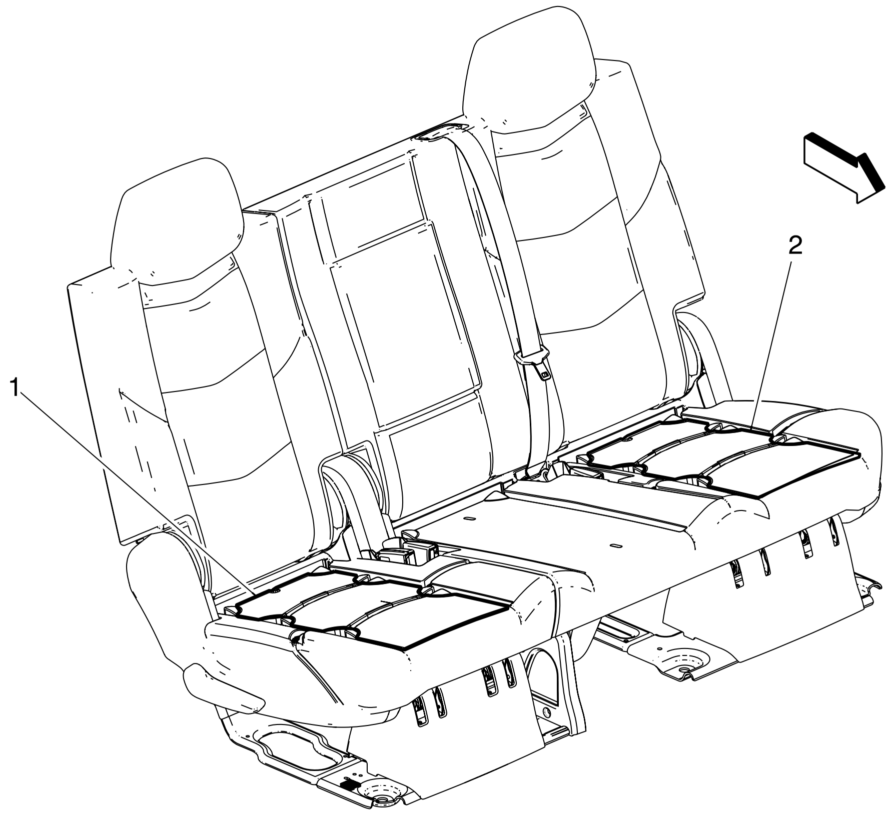
2nd Row Right Bucket Seat Components (ATN)



Items

1. B124RR Folding Seat Back Position Switch - 2nd Row Right (ATN or ATT)
2. M107RR Folding Seat Motor - 2nd Row Right (ATN or ATT)
3. E14H Seat Heating Element - Right Rear Cushion (KA6)

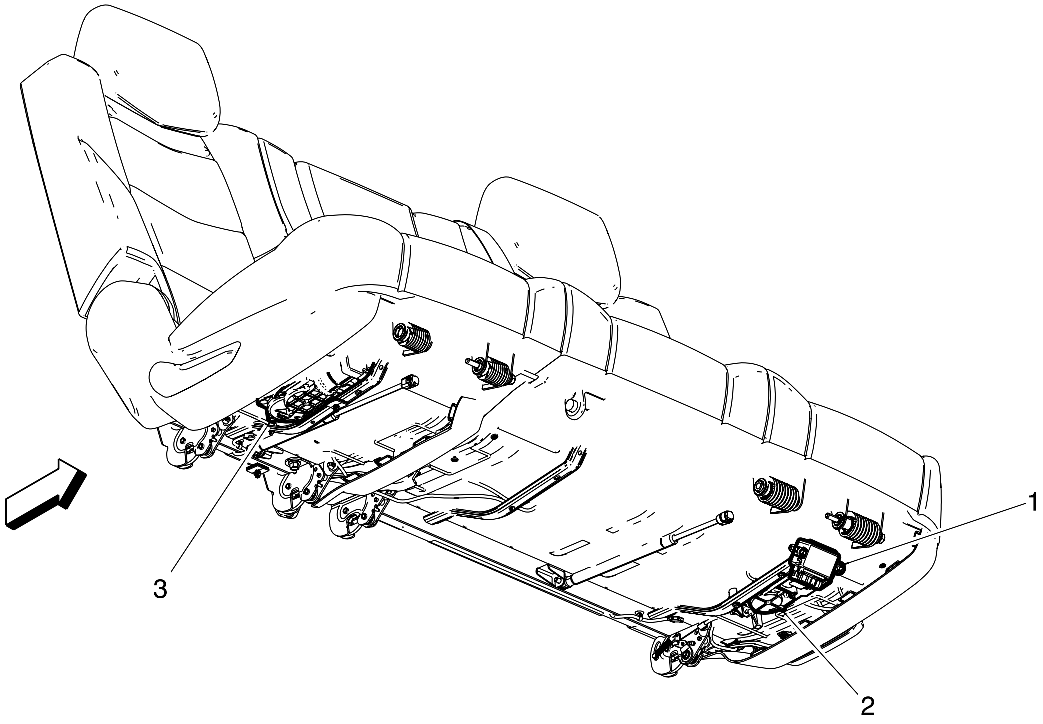
2nd Row Seat Cushions Components (ATT)



Items

1. E14H Seat Heating Element - Right Rear Cushion (KA6)
2. E14F Seat Heating Element - Left Rear Cushion (KA6)

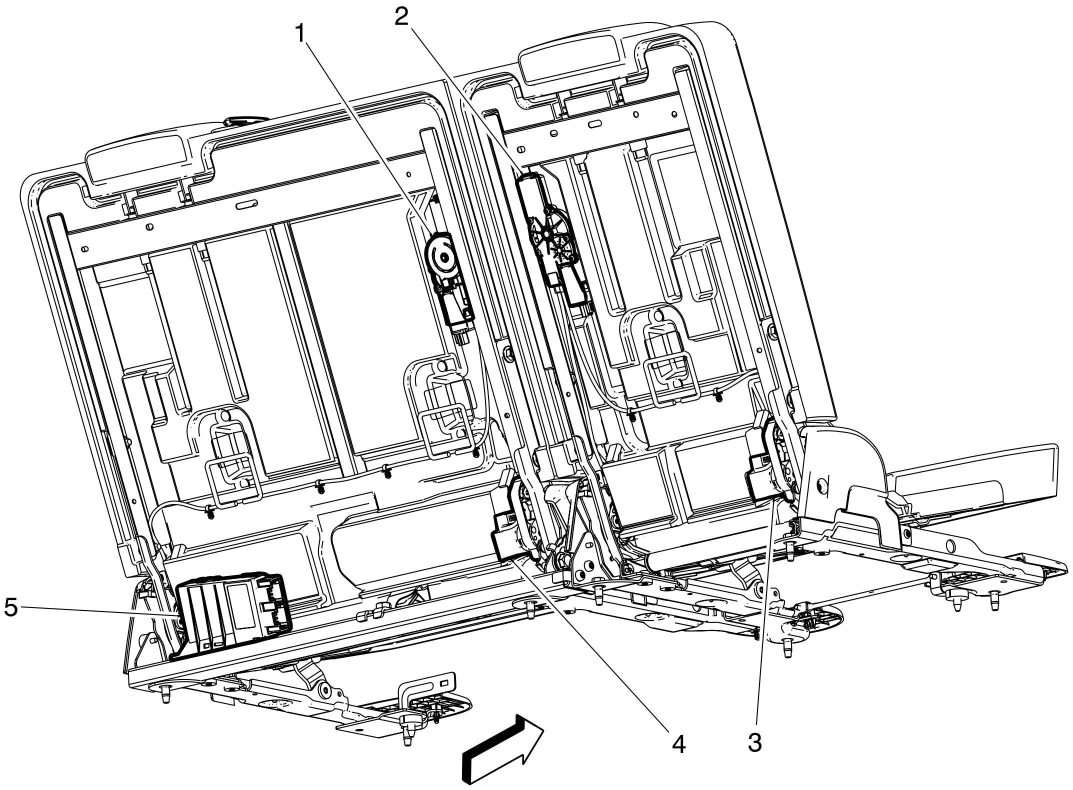
2nd Row Bench Seat Cushions Bottom Components (ATT)



Items

1. K29R Seat Heating Control Module - Rear (KA6)
2. M107LR Folding Seat Motor - 2nd Row Left (ATN or ATT)
3. M107RR Folding Seat Motor - 2nd Row Right (ATN or ATT)

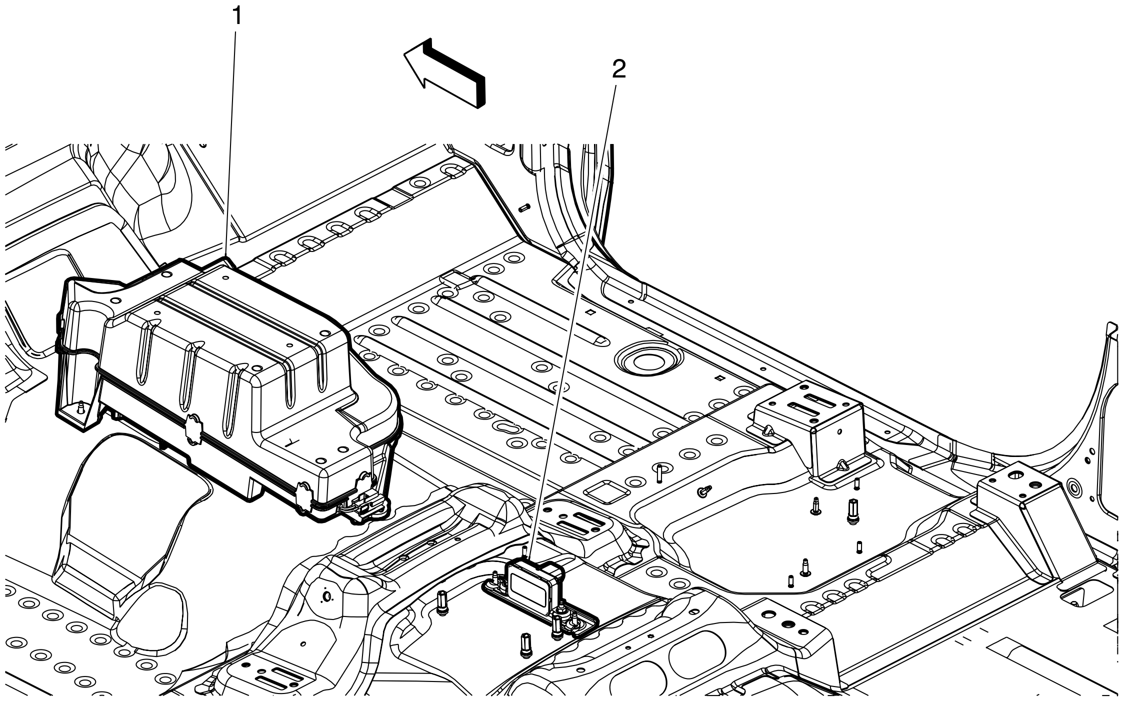
3rd Row Seat Back Components (AS8)



Items

1. M109LR Folding Seat Back Unlatch Motor - 3rd Row Left (AS8)
2. M109RR Folding Seat Back Unlatch Motor - 3rd Row Right (AS8)
3. M108RR Folding Seat Motor - 3rd Row Right (AS8)
4. M108LR Folding Seat Motor - 3rd Row Left (AS8)
5. K169 Folding Seat Control Module - 3rd Row (AS8)

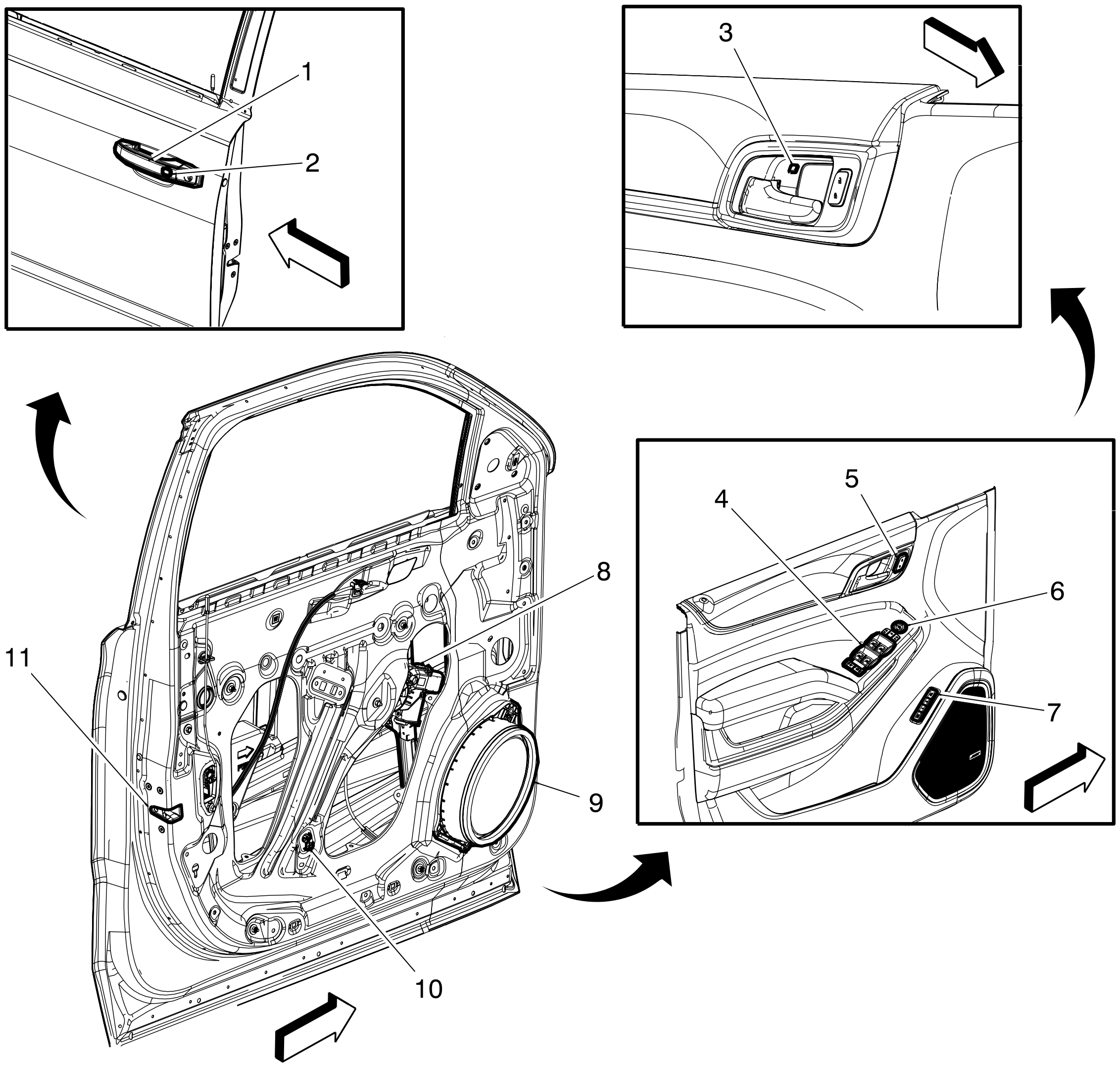
Front Center of The Passenger Compartment Components



Items

1. P19AC Speaker - Subwoofer (UQA, UQH or UQS)
2. B119 Multi-axis Acceleration Sensor (UGN)

Driver Door Components (X88 or Z88)

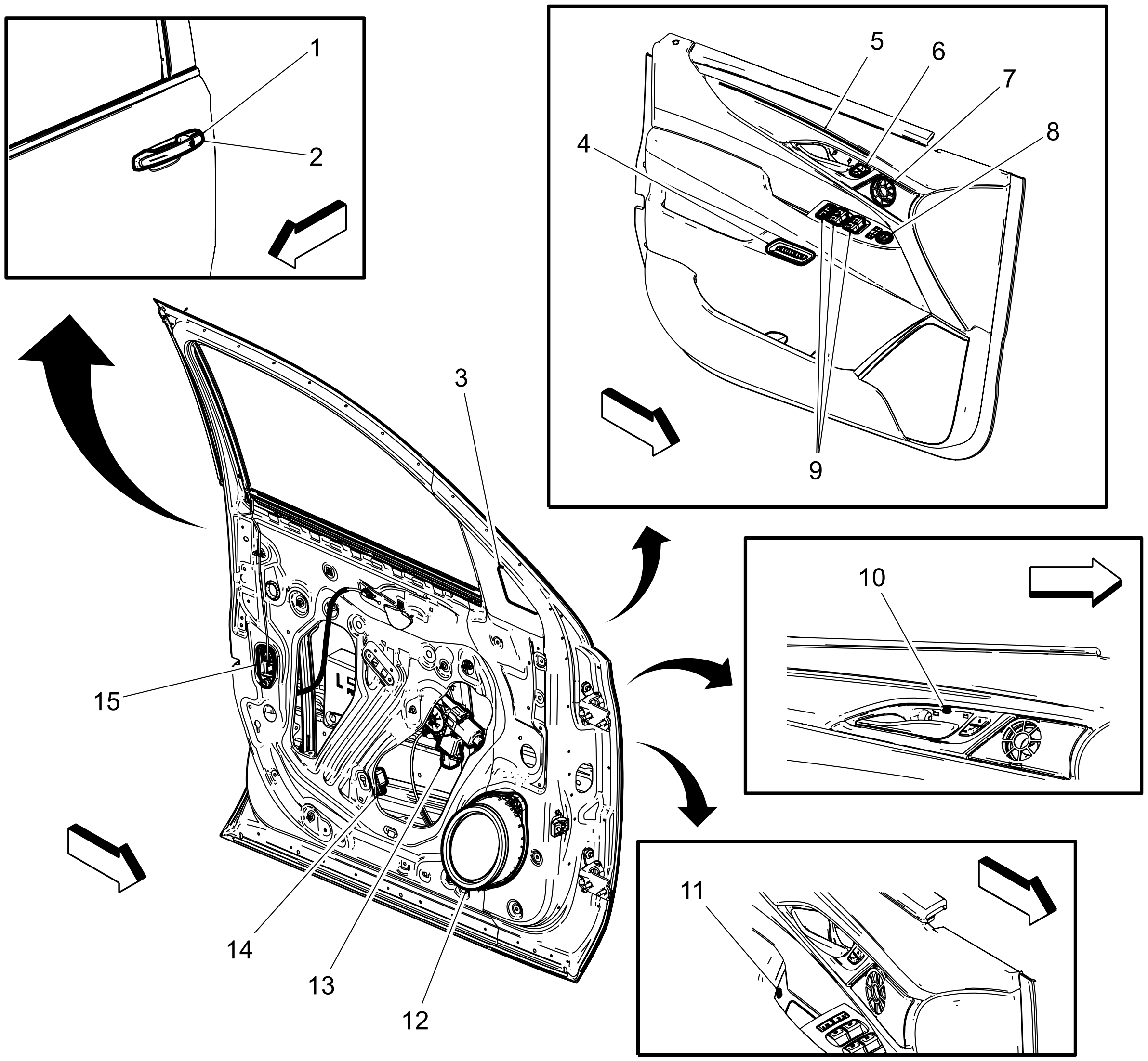


Items

1. A24D Door Handle Assembly - Driver Exterior
2. B27D Door Handle Switch - Driver Exterior
3. E1C Accent Lamp - Driver Door Handle
4. S79D Window Switch - Driver
5. S13D Door Lock Switch - Driver
6. S52 Outside Rearview Mirror Switch
7. S47D Seat Memory Switch - Driver (A45)
8. M74D Window Motor - Driver
9. P19AG Speaker - Left Front Door
10. B63LF Side Impact Sensor - Left Front
11. A23D Door Latch Assembly - Driver

11. A23D Door Latch Assembly - Driver

Driver Door Components (Z75)

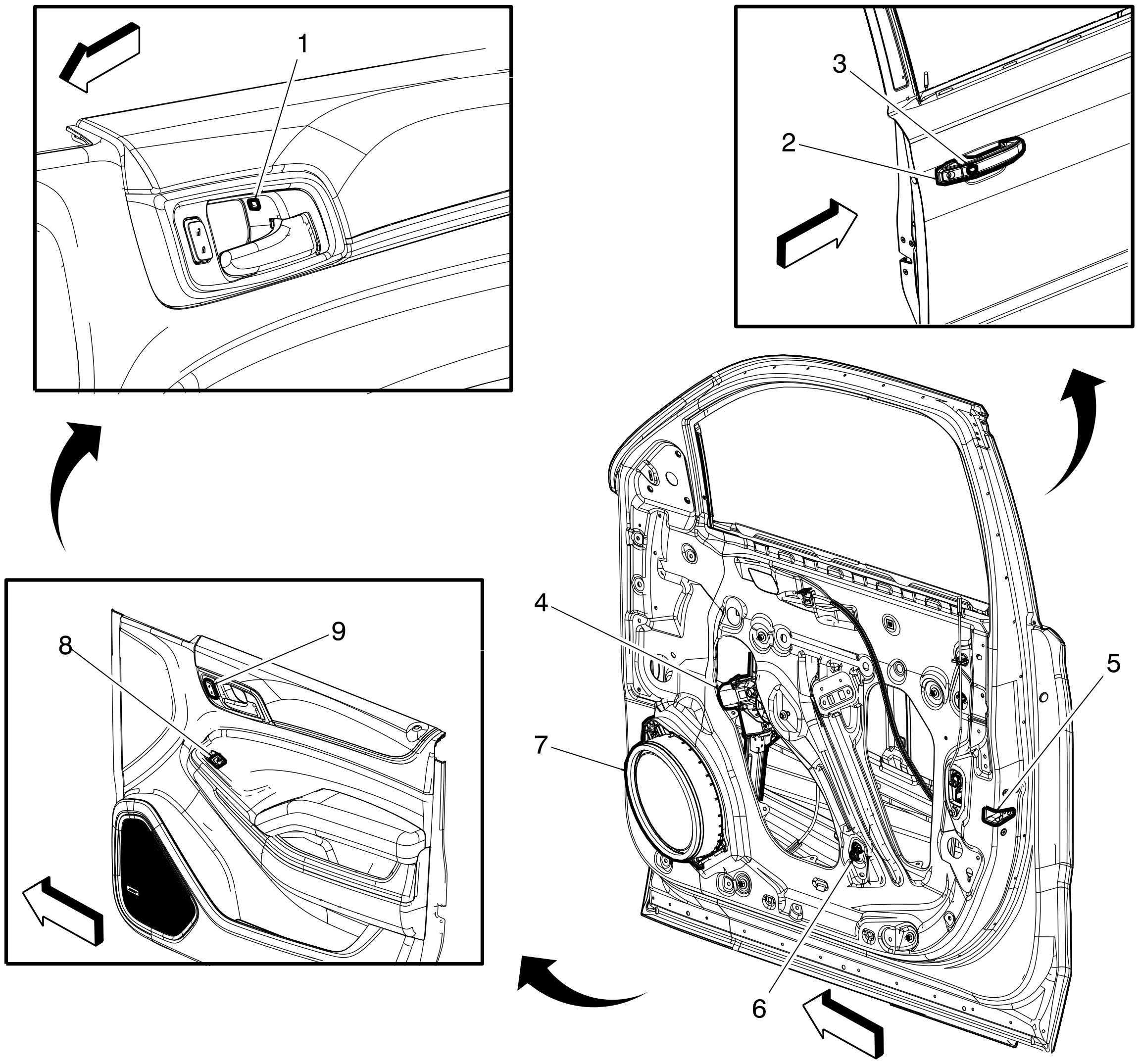


Items

1. A24D Door Handle Assembly - Driver Exterior
2. B27D Door Handle Switch - Driver Exterior
3. P19HD Speaker - Left Front Door Tweeter (UQH)
4. S47D Seat Memory Switch - Driver (A45)
5. E1D Accent Lamp - Driver Door (Z75)
6. S13D Door Lock Switch - Driver
7. P19AG Speaker - Left Front Door
8. S52 Outside Rearview Mirror Switch
9. S79D Window Switch - Driver
10. E1C Accent Lamp - Driver Door Handle
11. E63D Flood Lamp - Driver Door Handle (Z75)

11. E63D Flood Lamp - Driver Door Handle (Z75)
12. P19DD Speaker - Left Front Door Woofer (UQH)
13. M74D Window Motor - Driver
14. B63LF Side Impact Sensor - Left Front
15. A23D Door Latch Assembly - Driver

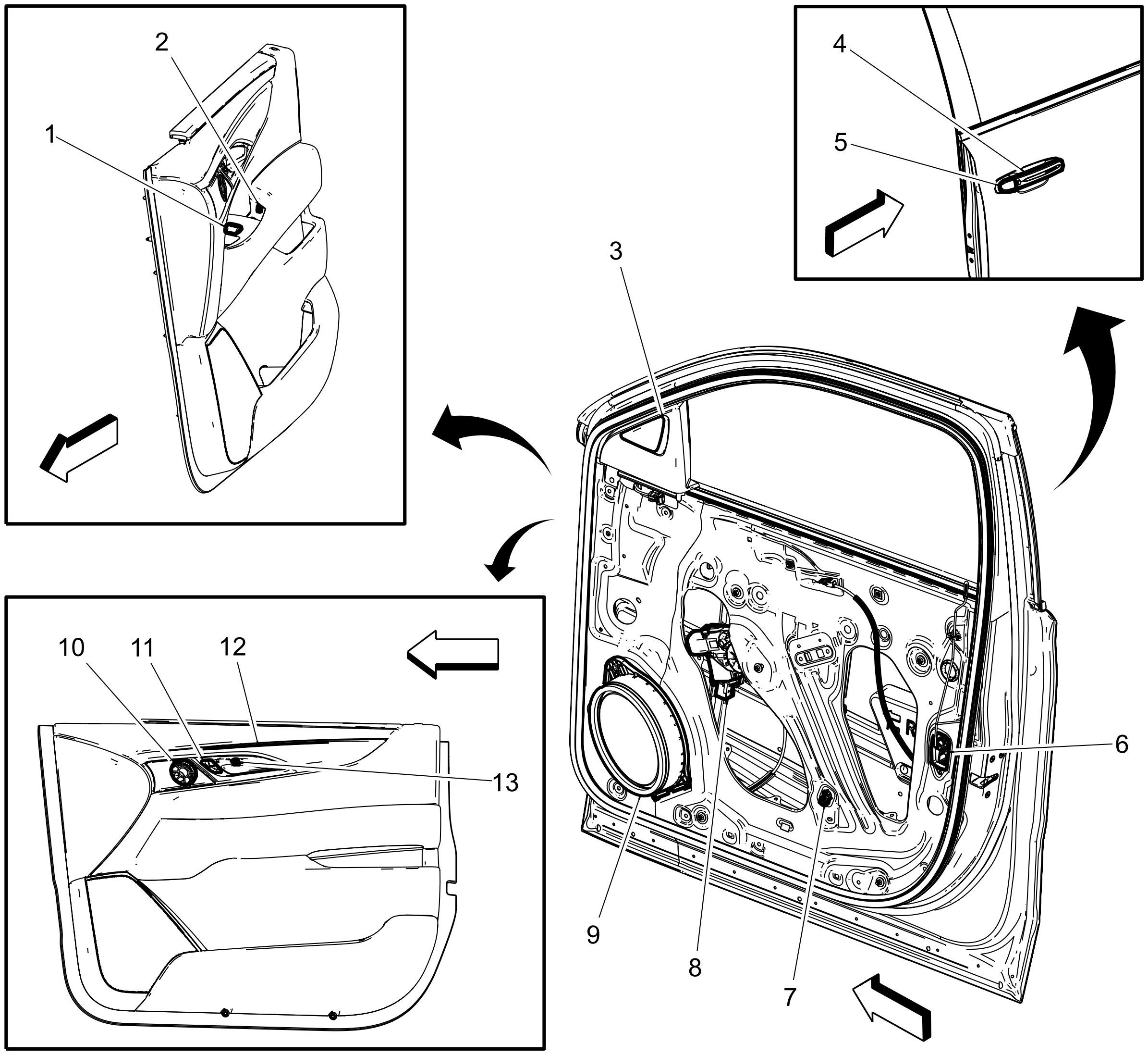
Passenger Door Components (X88 or Z88)



Items

1. E1M Accent Lamp - Passenger Door Handle
2. A24P Door Handle Assembly - Passenger Exterior
3. B27P Door Handle Switch - Passenger Exterior
4. M74P Window Motor - Passenger
5. A23P Door Latch Assembly - Passenger
6. B63RF Side Impact Sensor - Right Front
7. P19AH Speaker - Right Front Door
8. S79P Window Switch - Passenger
9. S13P Door Lock Switch - Passenger

Passenger Door Components (Z75)

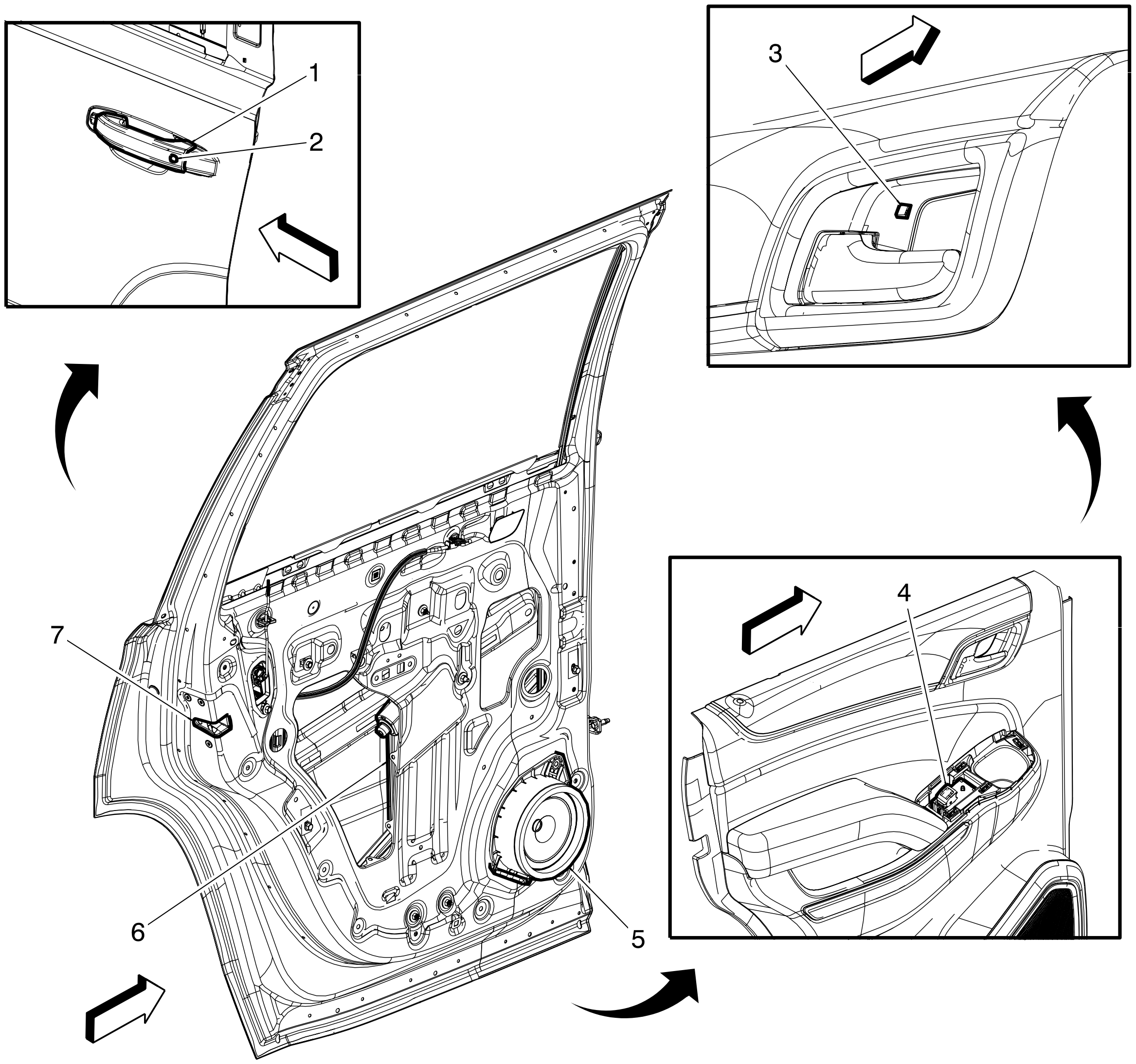


Items

1. S79P Window Switch - Passenger
2. E63P Flood Lamp - Passenger Door Handle (Z75)
3. P19VD Speaker - Right Front Door Tweeter (UQH)
4. A24P Door Handle Assembly - Passenger Exterior
5. B27P Door Handle Switch - Passenger Exterior
6. A23P Door Latch Assembly - Passenger
7. B63RF Side Impact Sensor - Right Front
8. M74P Window Motor - Passenger
9. P19PD Speaker - Right Front Door Woofer (UQH)
10. P19AH Speaker - Right Front Door
11. S13P Door Lock Switch - Passenger

11. S13P Door Lock Switch - Passenger
12. E1P Accent Lamp - Passenger Door (Z75)
13. E1M Accent Lamp - Passenger Door Handle

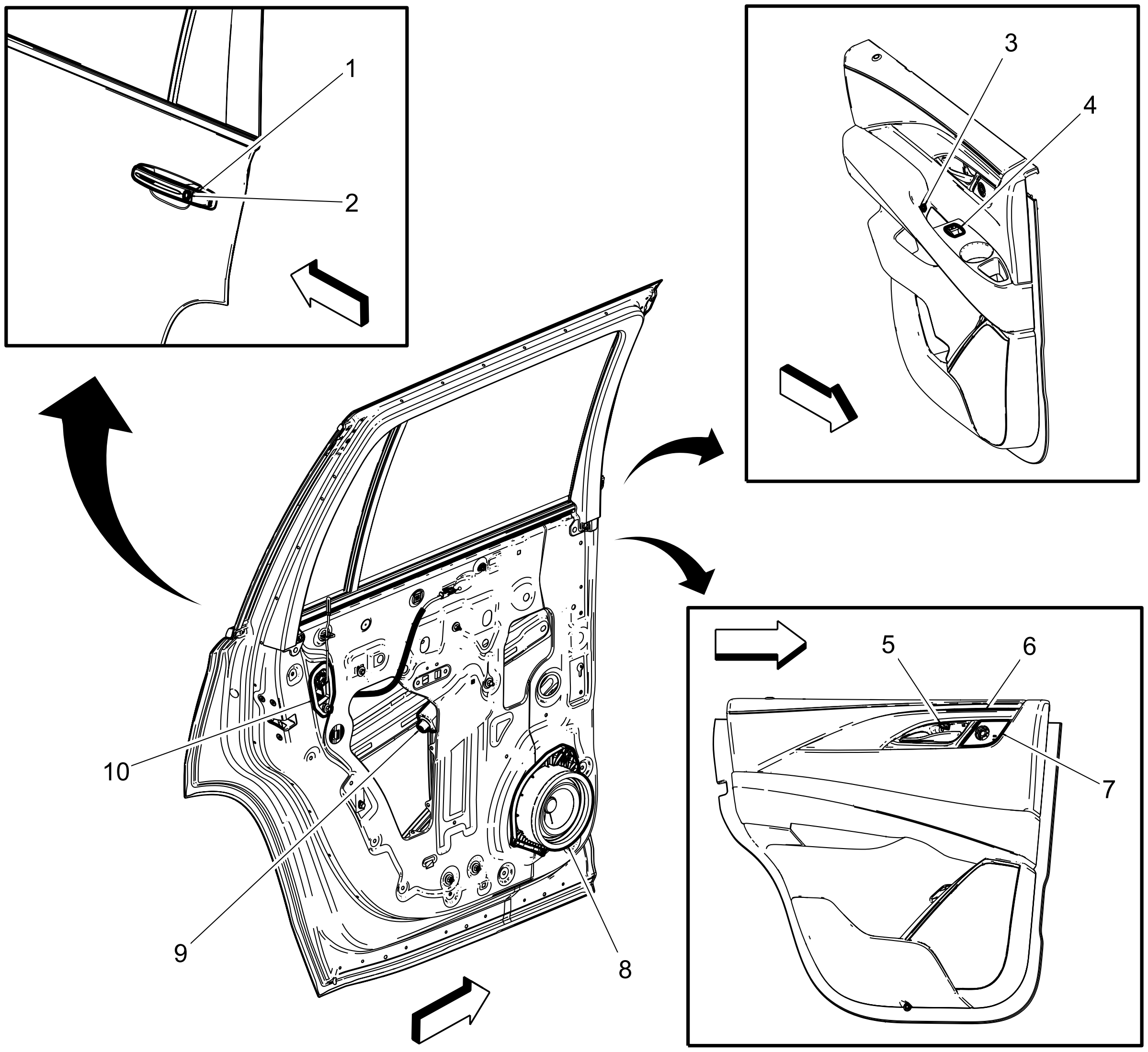
Left Rear Door Components (X88 or Z88)



Items

1. A24LR Door Handle Assembly - Left Rear Exterior
2. B27LR Door Handle Switch - Left Rear Exterior
3. E1E Accent Lamp - Left Rear Door Handle
4. S79LR Window Switch - Left Rear
5. P19AL Speaker - Left Rear Door
6. M74LR Window Motor - Left Rear
7. A23LR Door Latch Assembly - Left Rear

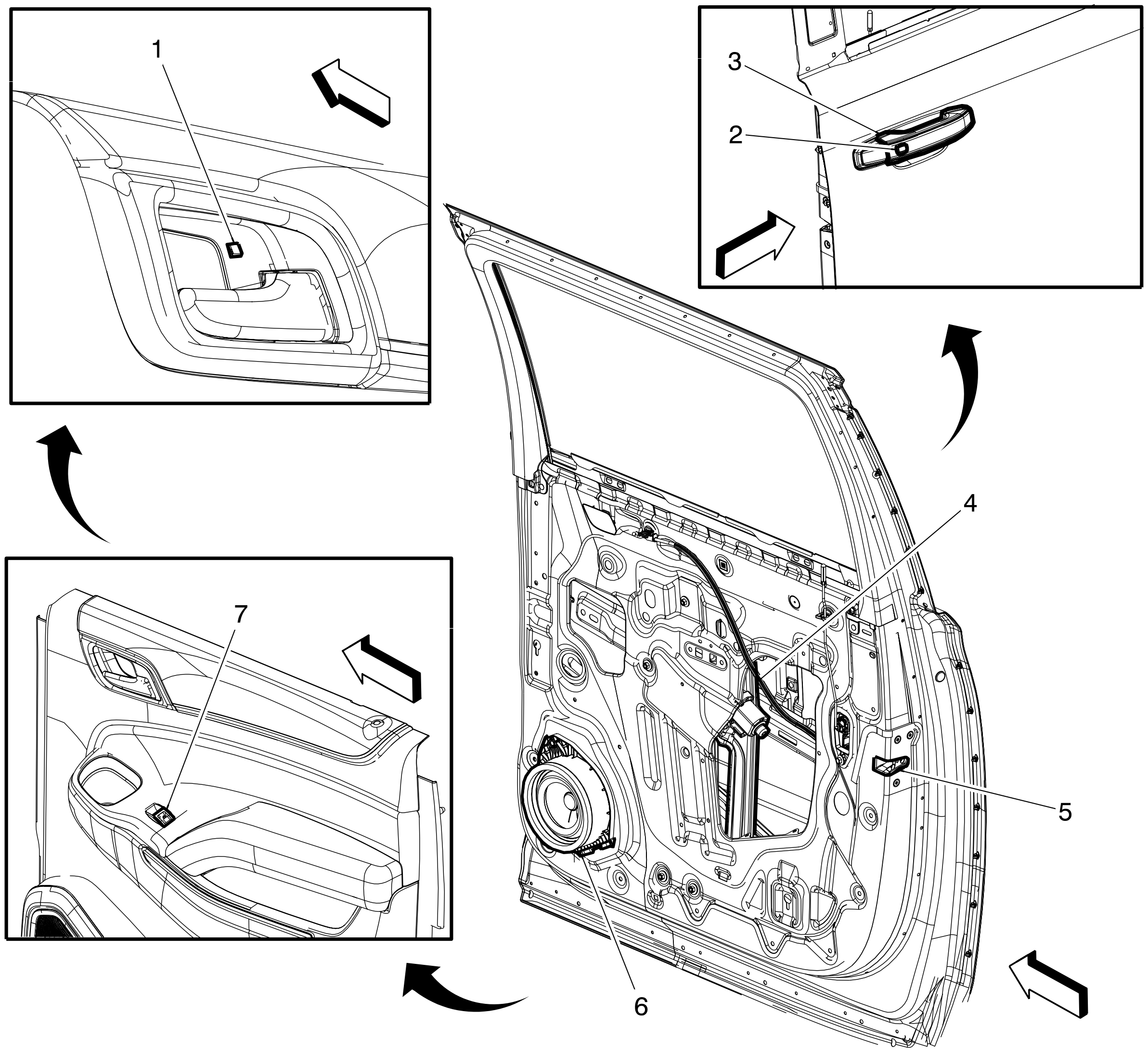
Left Rear Door Components (Z75)



Items

1. A24LR Door Handle Assembly - Left Rear Exterior
2. B27LR Door Handle Switch - Left Rear Exterior
3. E55LR Flood Lamp - Left Rear Door Pocket (Z75)
4. S79LR Window Switch - Left Rear
5. E1E Accent Lamp - Left Rear Door Handle
6. E1LR Accent Lamp - Left Rear Door (Z75)
7. P19M Speaker - Left Rear Tweeter (UQH)
8. P19AL Speaker - Left Rear Door
9. M74LR Window Motor - Left Rear
10. A23LR Door Latch Assembly - Left Rear

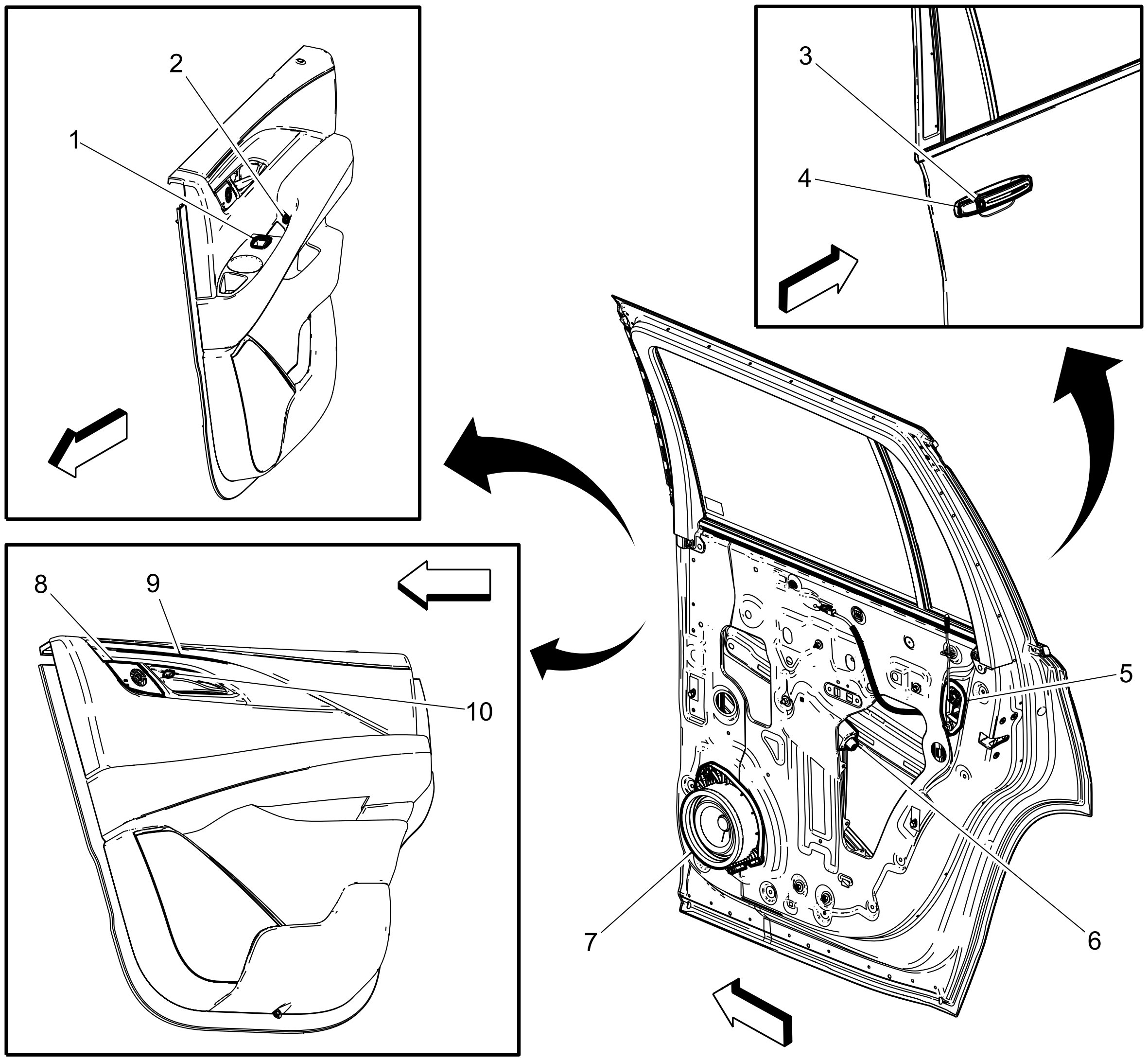
Right Rear Door Components (X88 or Z88)



Items

1. E1E Accent Lamp - Left Rear Door Handle
2. B27RR Door Handle Switch - Right Rear Exterior
3. A24RR Door Handle Assembly - Right Rear Exterior
4. M74RR Window Motor - Right Rear
5. A23P Door Latch Assembly - Passenger
6. P19AM Speaker - Right Rear Door
7. S79RR Window Switch - Right Rear

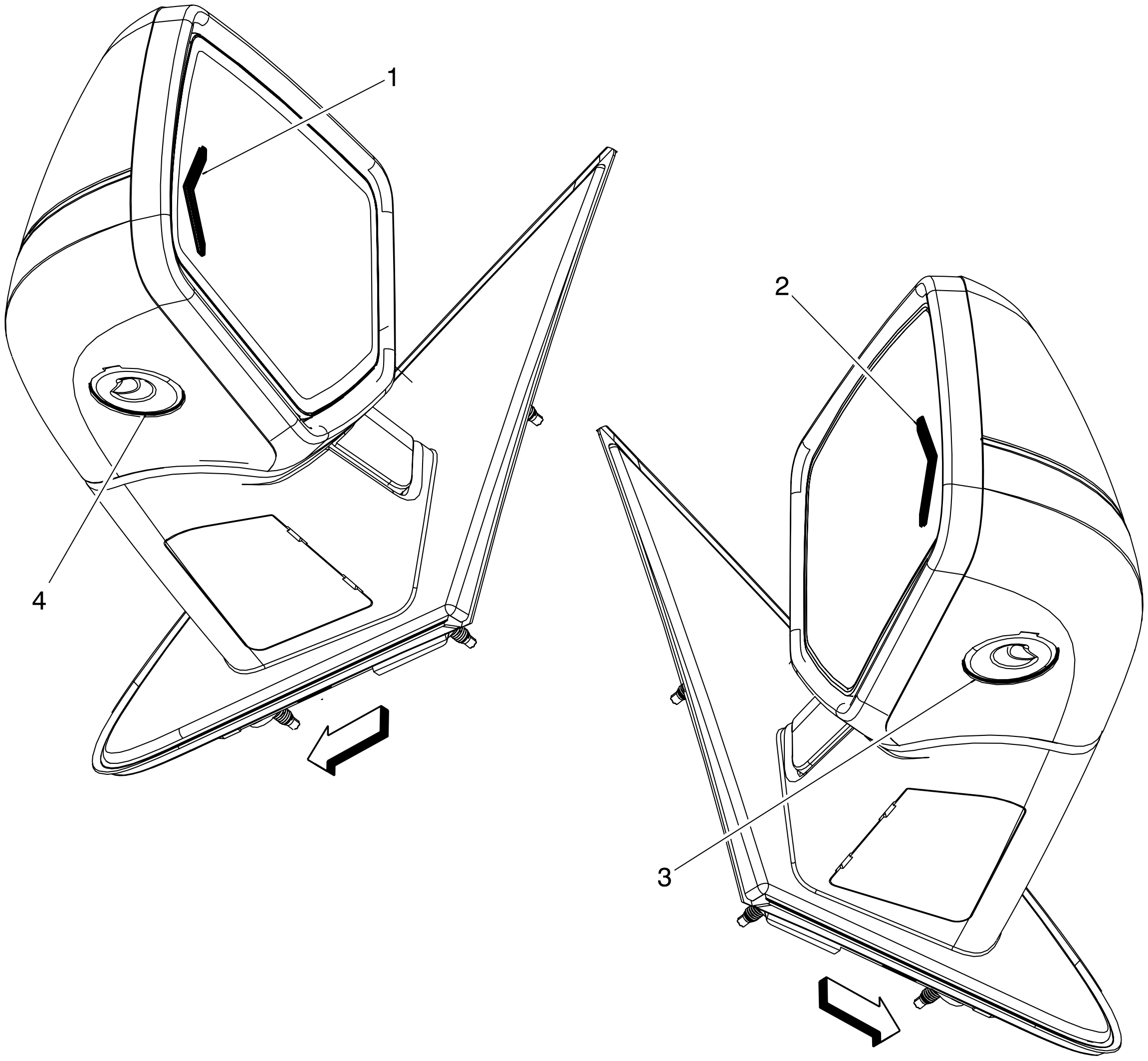
Right Rear Door Components (Z75)



Items

1. S79RR Window Switch - Right Rear
2. E55RR Flood Lamp - Right Rear Door Pocket (Z75)
3. B27RR Door Handle Switch - Right Rear Exterior
4. A24RR Door Handle Assembly - Right Rear Exterior
5. A23RR Door Latch Assembly - Right Rear
6. M74RR Window Motor - Right Rear
7. P19AM Speaker - Right Rear Door
8. P19Z Speaker - Right Rear Tweeter (UQH)
9. E1RR Accent Lamp - Right Rear Door (Z75)
10. E1F Accent Lamp - Right Rear Door Handle

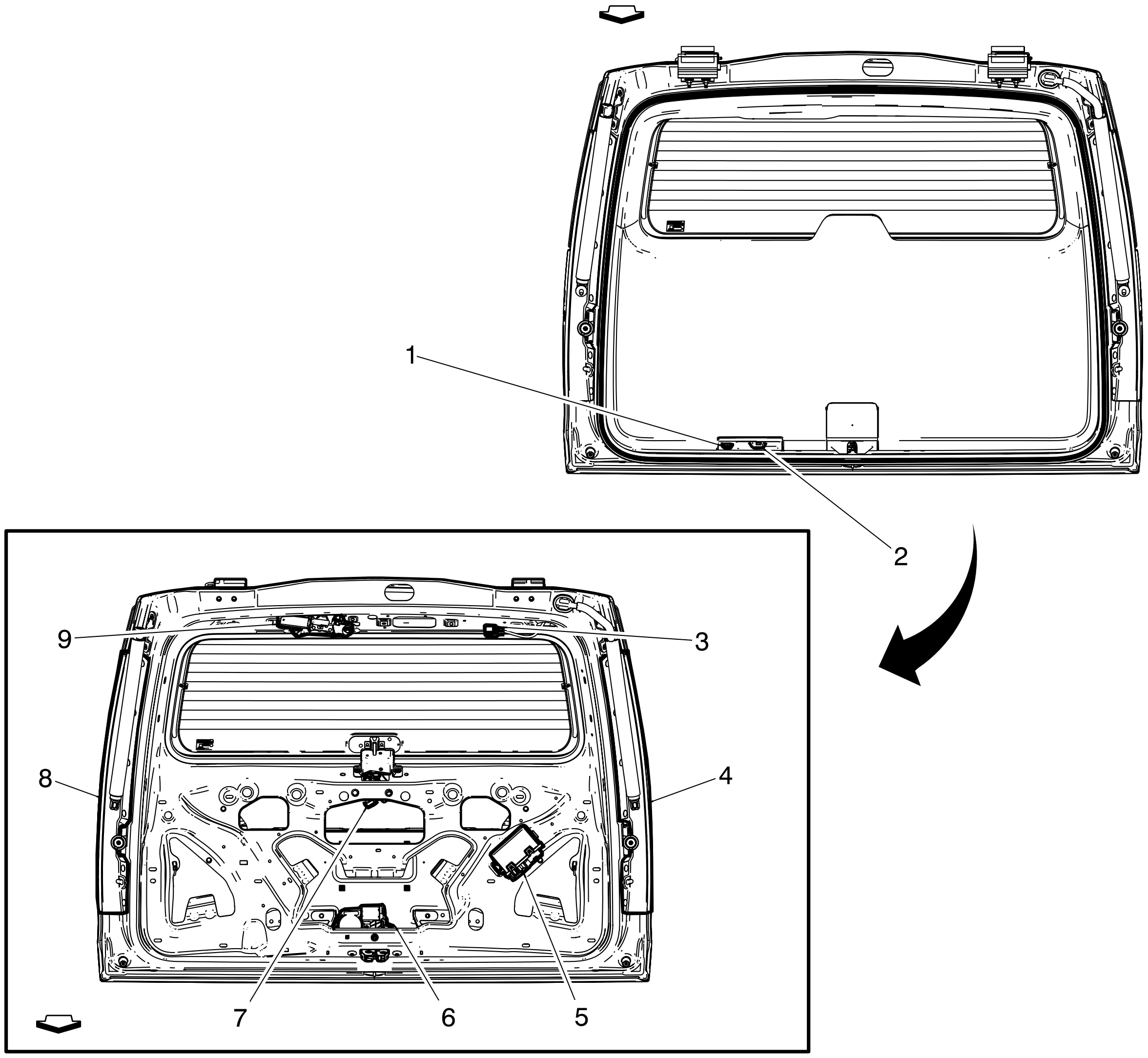
Door Mirror Components



Items

1. E4Y Turn Signal Repeater Lamp - Left
2. E4Z Turn Signal Repeater Lamp - Right
3. E8YP Outside Rearview Mirror Courtesy Lamp - Passenger (DL3)
4. E8YD Outside Rearview Mirror Courtesy Lamp - Driver (DL3)

Liftgate Components

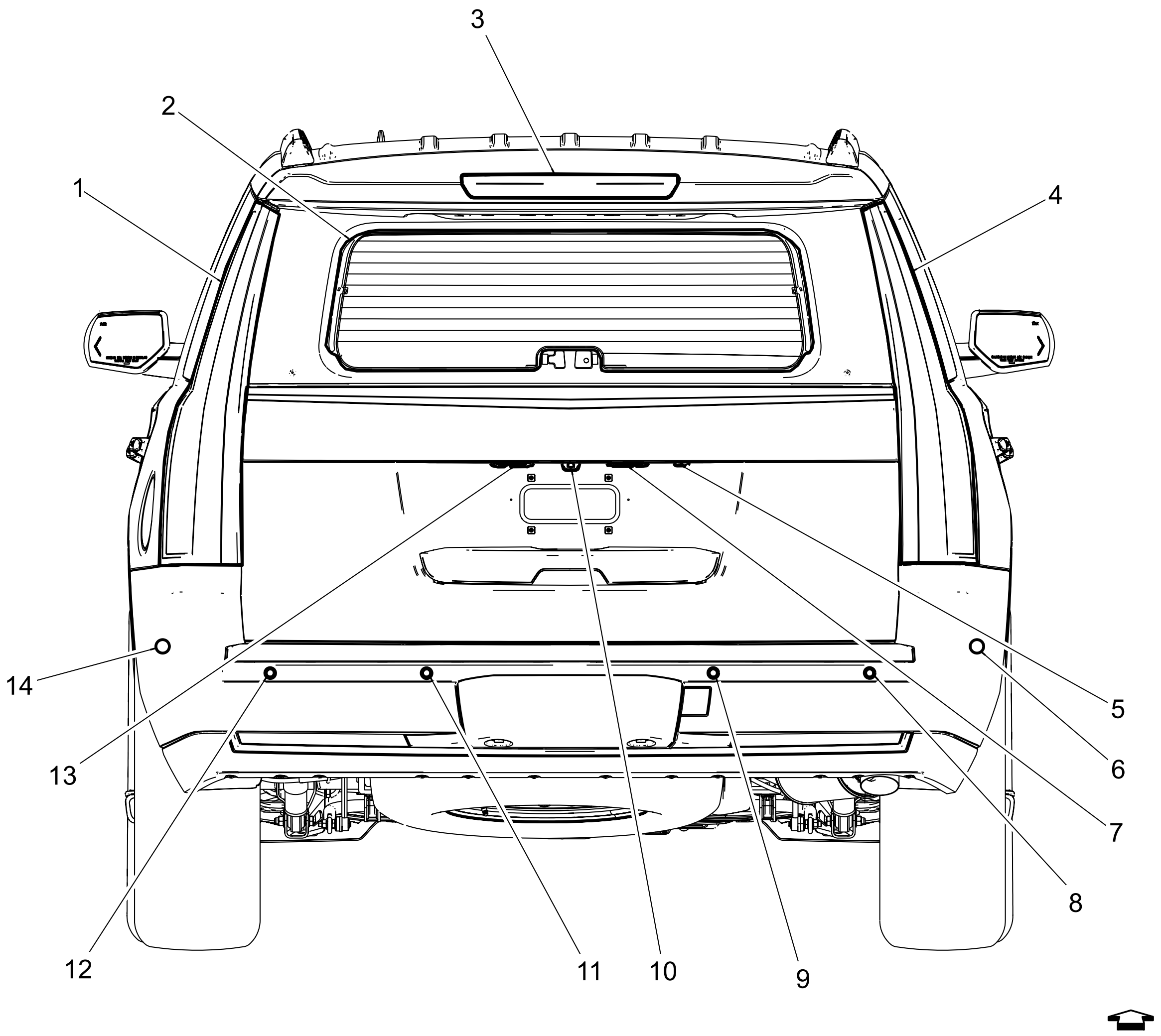


Items

1. S46 Liftgate Handle Switch (TB5)
2. B70 Liftgate Close Switch (TB5 or TC2)
3. M31 Liftgate Motor (TB5 or TC2)
4. B71L Liftgate Object Sensor - Left (TB5 or TC2)
5. K39 Liftgate Control Module (TB5 or TC2)
6. A23C Liftgate Latch Assembly
7. M33 Liftgate Window Latch Assembly
8. B71R Liftgate Object Sensor - Right (TB5 or TC2)
9. M45 Rear Wiper Motor

Luggage Compartment/Rear of Vehicle Component Views

Rear of Vehicle Components (Z75)



Items

1. E42L Tail Lamp Assembly - Left
2. E18 Rear Defogger Grid
3. E6 Center High Mounted Stop Lamp
4. E42R Tail Lamp Assembly - Right
5. S141 Liftgate Window Unlatch Switch
6. B306N Parking Assist Sensor - Side Right Rear (UKG)
7. E7R License Plate Lamp - Right
8. B306H Parking Assist Sensor - Rear Right Outer (UD5 or UD7)
9. B306G Parking Assist Sensor - Rear Right Middle (UD5 or UD7)
10. B87 Rearview Camera
11. B306F Parking Assist Sensor - Rear Left Middle (UD5 or UD7)

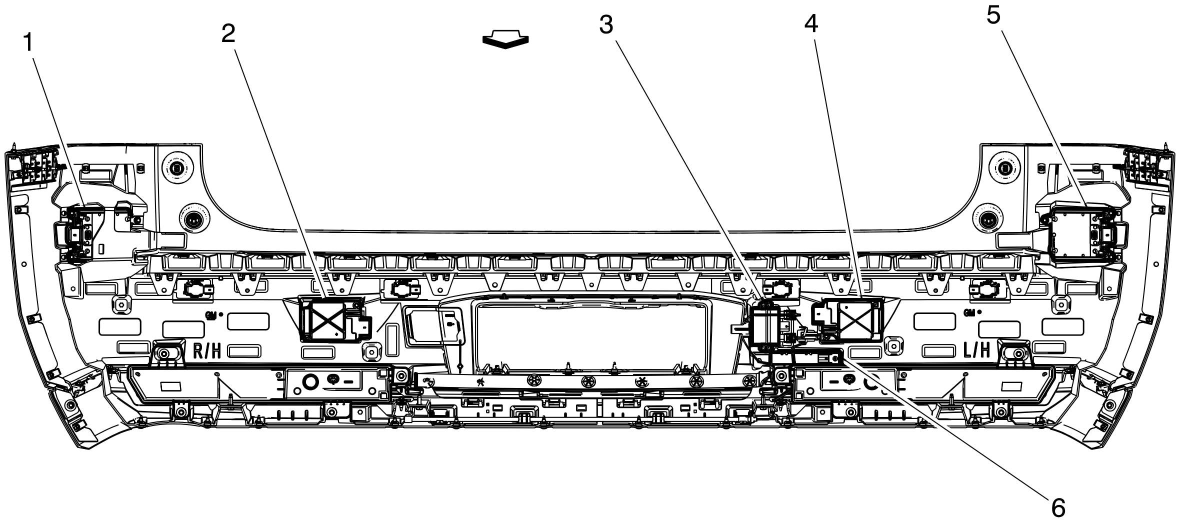
11. B306F Parking Assist Sensor - Rear Left Middle (UD5 or UD7)

12. B306E Parking Assist Sensor - Rear Left Outer (UD5 or UD7)

13. E7L License Plate Lamp - Left

14. B306M Parking Assist Sensor - Side Left Rear (UKG)

Behind Rear Fascia Components



Items

1. B218R Side Object Sensor Module - Right (UKC)

2. B233RR Radar Sensor Module - Short Range Right Rear (UVZ)

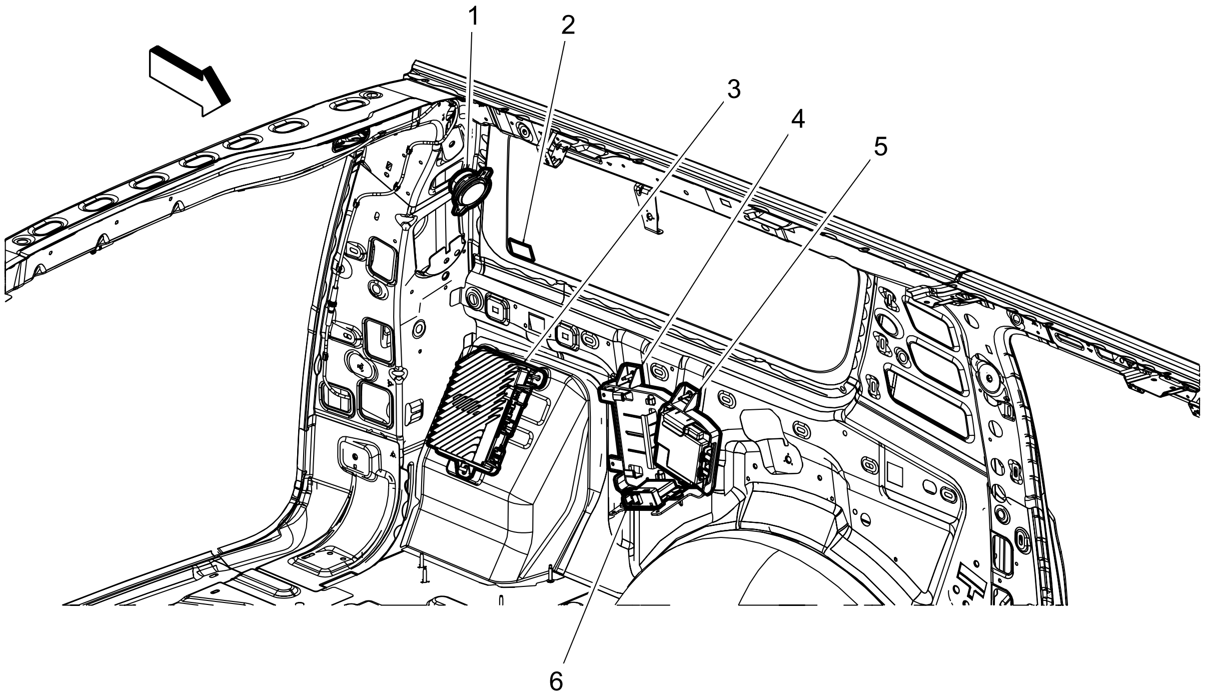
3. K171 Hands-Free Liftgate Sensor Control Module (TC2)

4. B233LR Radar Sensor Module - Short Range Left Rear (UVZ)

5. B218L Side Object Sensor Module - Left (UKC)

6. T10G Keyless Entry Antenna - Rear Fascia (ATH or BTM)

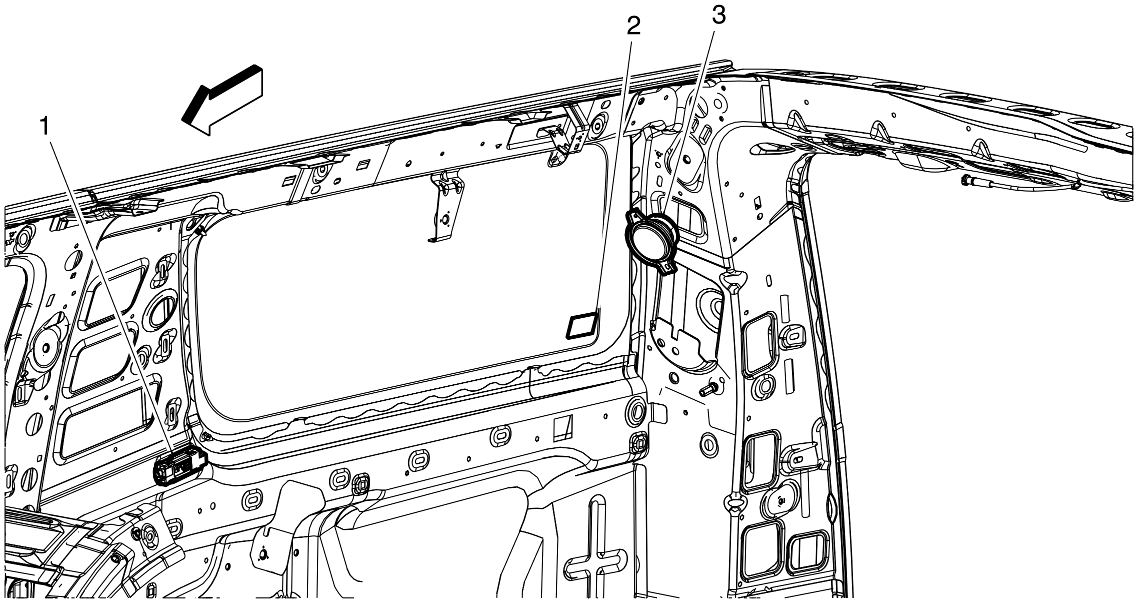
Left Rear Cargo Area Components



Items

1. P19AN Speaker - Left Rear Trim Panel (UQA, UQH or UQS)
2. B159L Glass Breakage Sensor - Left (UTT)
3. T3 Audio Amplifier (UQA, UQH or UQS)
4. K124 Active Safety Control Module (UGN with Z75)
5. K84 Keyless Entry Control Module (ATH or BTM)
6. K182 Parking Assist Control Module (UD5 or UD7)

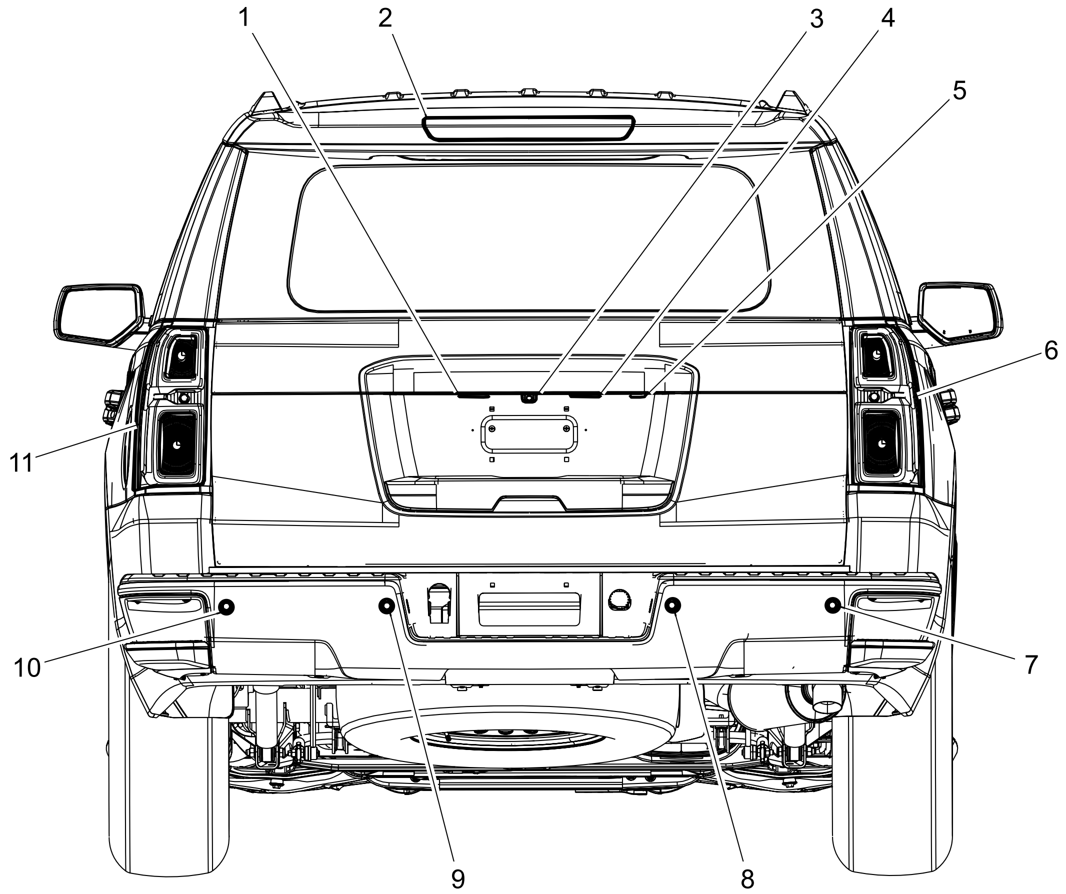
Right Rear Cargo Area Components



Items

1. K84 Keyless Entry Control Module (ATH or BTM)
2. B159R Glass Breakage Sensor - Right (UTT)
3. P19AP Speaker - Right Rear Trim Panel (UQA, UQH or UQS)

Rear of Vehicle Components (X88)

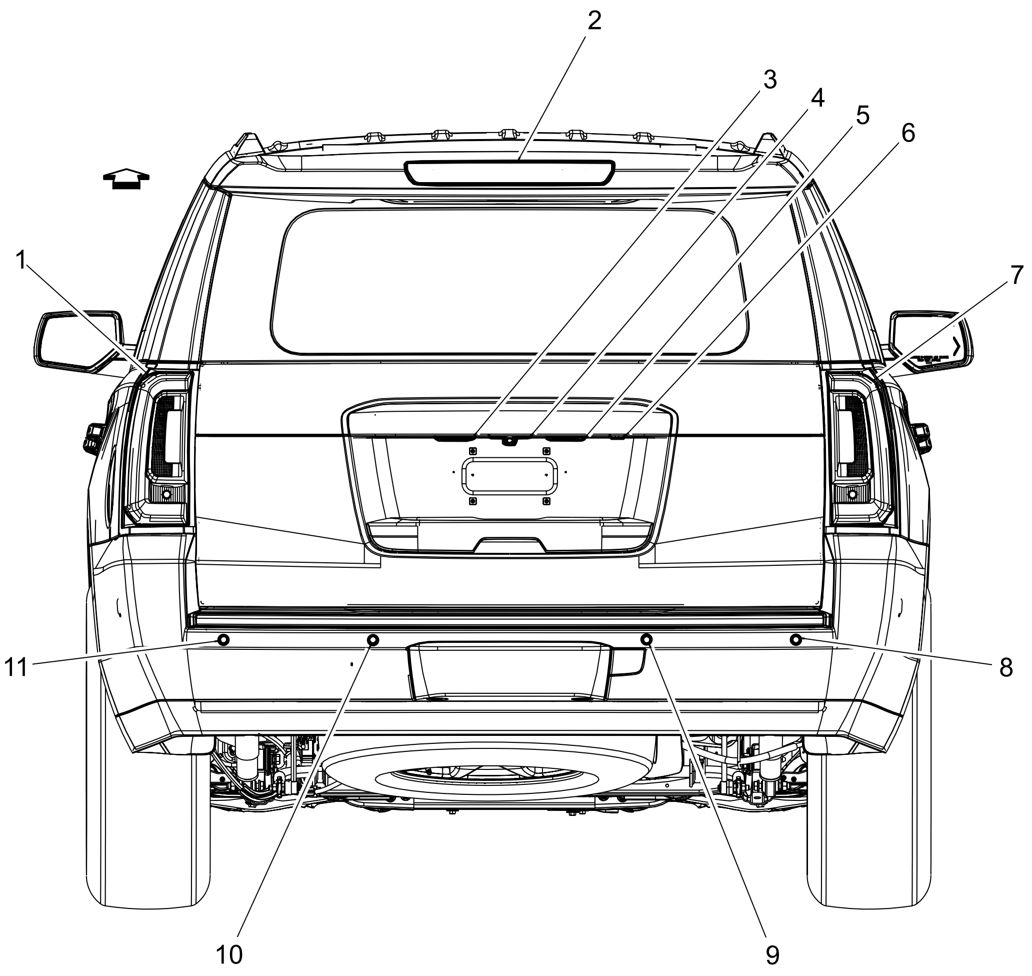


Items

1. E7L License Plate Lamp - Left
2. E6 Center High Mounted Stop Lamp
3. B87 Rearview Camera
4. E7R License Plate Lamp - Right
5. S46B Liftgate Unlatch Switch (TB4)
6. E42R Tail Lamp Assembly - Right
7. B306H Parking Assist Sensor - Rear Right Outer (UD5 or UD7)
8. B306G Parking Assist Sensor - Rear Right Middle (UD5 or UD7)
9. B306F Parking Assist Sensor - Rear Left Middle (UD5 or UD7)
10. B306E Parking Assist Sensor - Rear Left Outer (UD5 or UD7)
11. E42L Tail Lamp Assembly - Left

11. E42L Tail Lamp Assembly - Left

Rear of Vehicle Components (Z88)

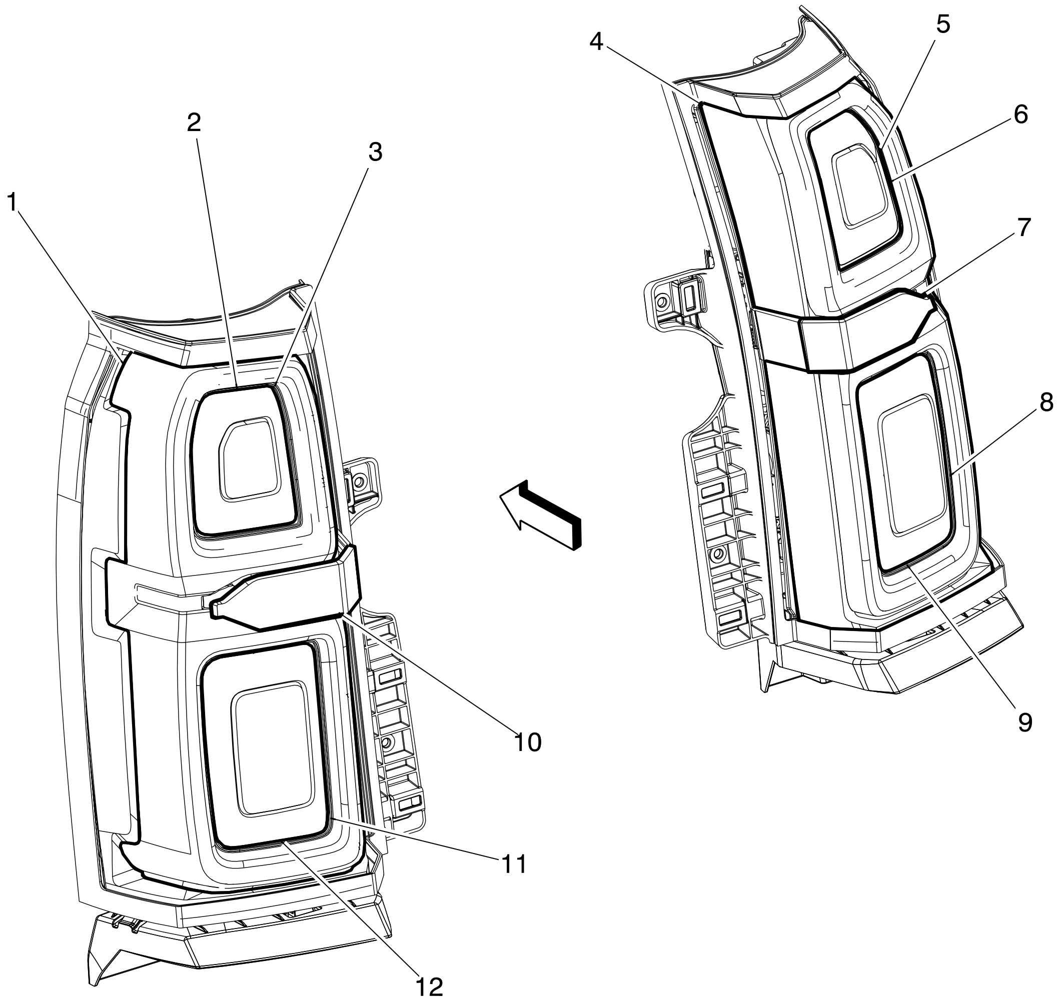


Items

1. E42L Tail Lamp Assembly - Left
2. E6 Center High Mounted Stop Lamp
3. E7L License Plate Lamp - Left
4. B87 Rearview Camera
5. E7R License Plate Lamp - Right
6. S46B Liftgate Unlatch Switch (TB4)
7. E42R Tail Lamp Assembly - Right
8. B306H Parking Assist Sensor - Rear Right Outer (UD5 or UD7)
9. B306G Parking Assist Sensor - Rear Right Middle (UD5 or UD7)
10. B306F Parking Assist Sensor - Rear Left Middle (UD5 or UD7)
11. B306E Parking Assist Sensor - Rear Left Outer (UD5 or UD7)

11. B306E Parking Assist Sensor - Rear Left Outer (UD5 or UD7)

Tail Lamp Components (X88)

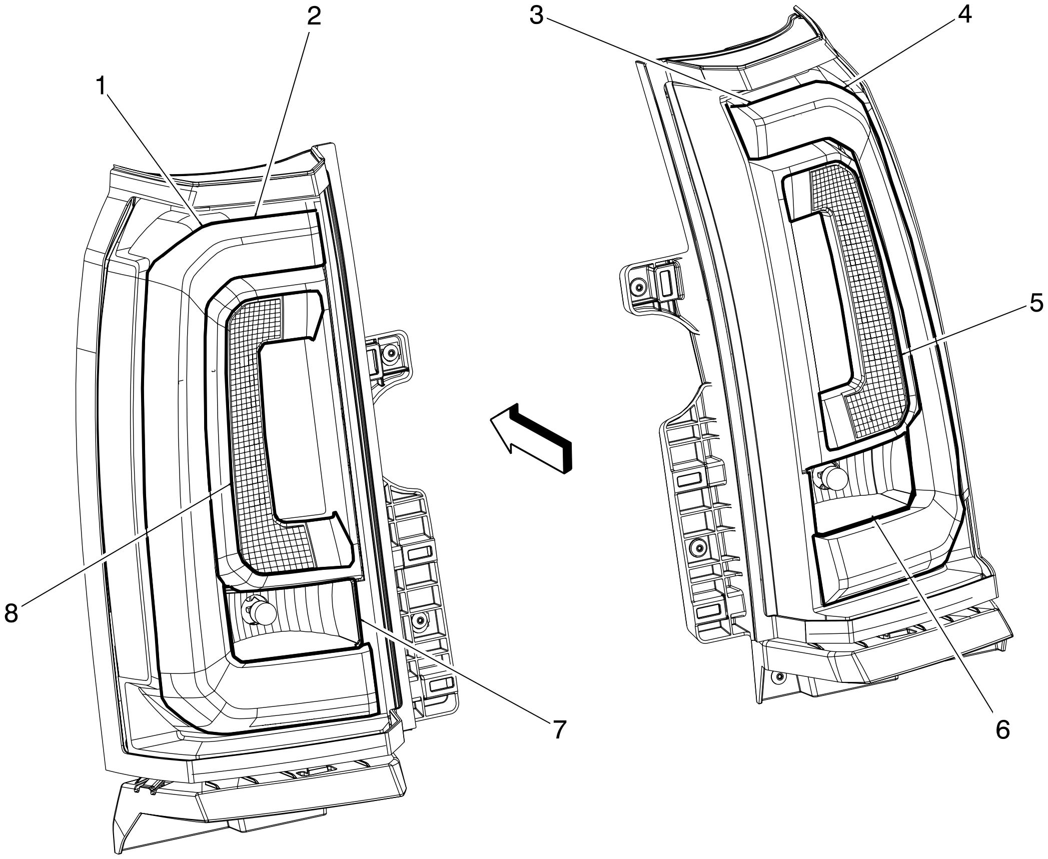


Items

1. E5E Tail Lamp - Left
2. E5AS Stop/Turn Signal Lamp - Left Upper (X88 without T89)
3. E5L Stop Lamp - Left (Z88, Z75, or X88 with T89)
4. E5F Tail Lamp - Right
5. E5AU Stop/Turn Signal Lamp - Right Upper (X88 without T89)
6. E5R Stop Lamp - Right (Z88, Z75, or X88 with T89)
7. E5B Backup Lamp - Right
8. E5AV Stop/Turn Signal Lamp - Right Lower (X88 without T89)
9. E4RR Turn Signal Lamp - Right Rear (Z88, Z75, or X88 with T89)
10. E5A Backup Lamp - Left
11. E4LR Turn Signal Lamp - Left Rear (Z88, Z75, or X88 with T89)

11. E4LR Turn Signal Lamp - Left Rear (Z88, Z75, or X88 with T89)
12. E5AT Stop/Turn Signal Lamp - Left Lower (X88 without T89)

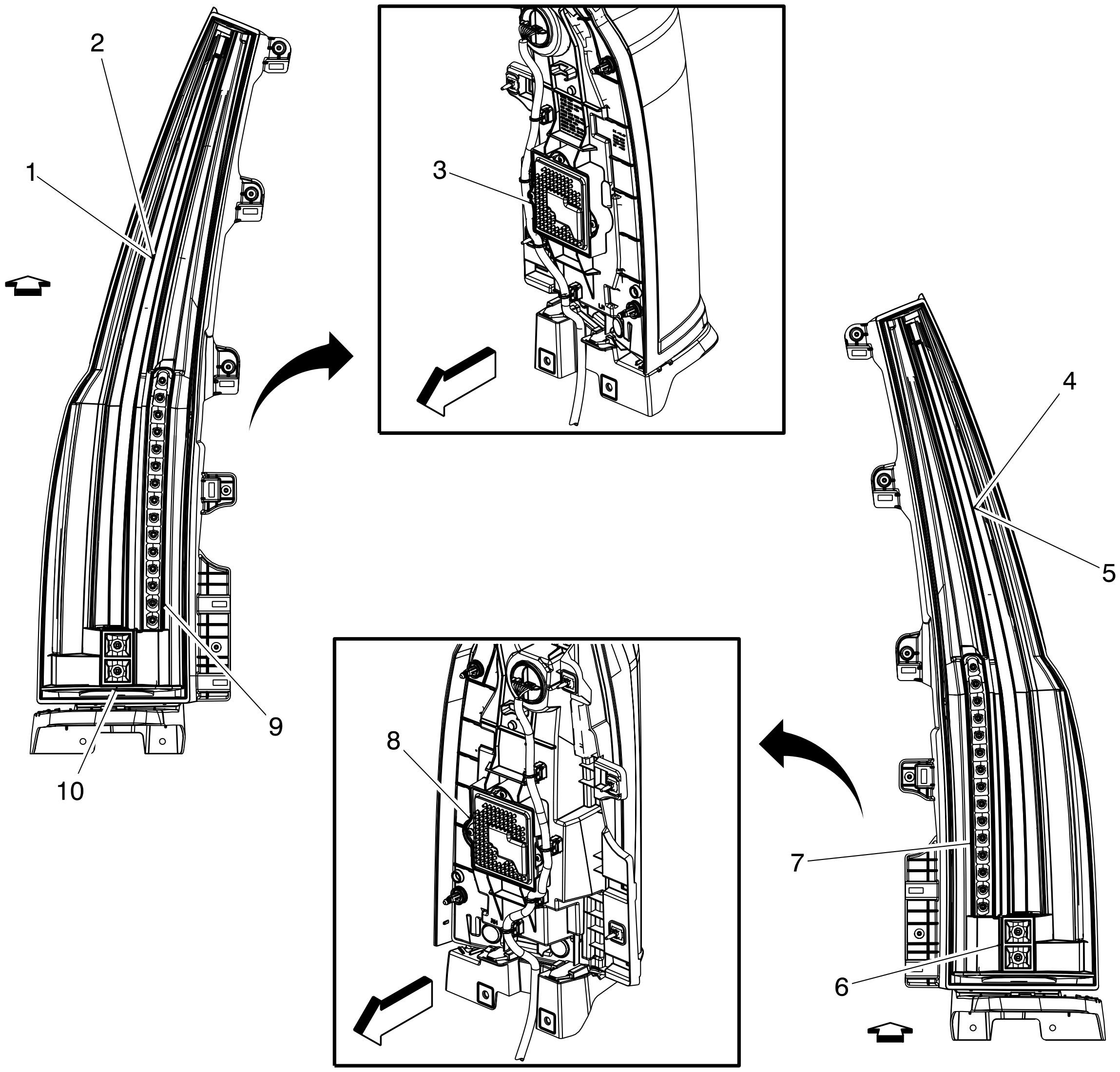
Tail Lamp Components (Z88)



Items

1. E5L Stop Lamp - Left (Z88, Z75, or X88 with T89)
2. E5E Tail Lamp - Left
3. E5R Stop Lamp - Right (Z88, Z75, or X88 with T89)
4. E5F Tail Lamp - Right
5. E4RR Turn Signal Lamp - Right Rear (Z88, Z75, or X88 with T89)
6. E5B Backup Lamp - Right
7. E5A Backup Lamp - Left
8. E4LR Turn Signal Lamp - Left Rear (Z88, Z75, or X88 with T89)

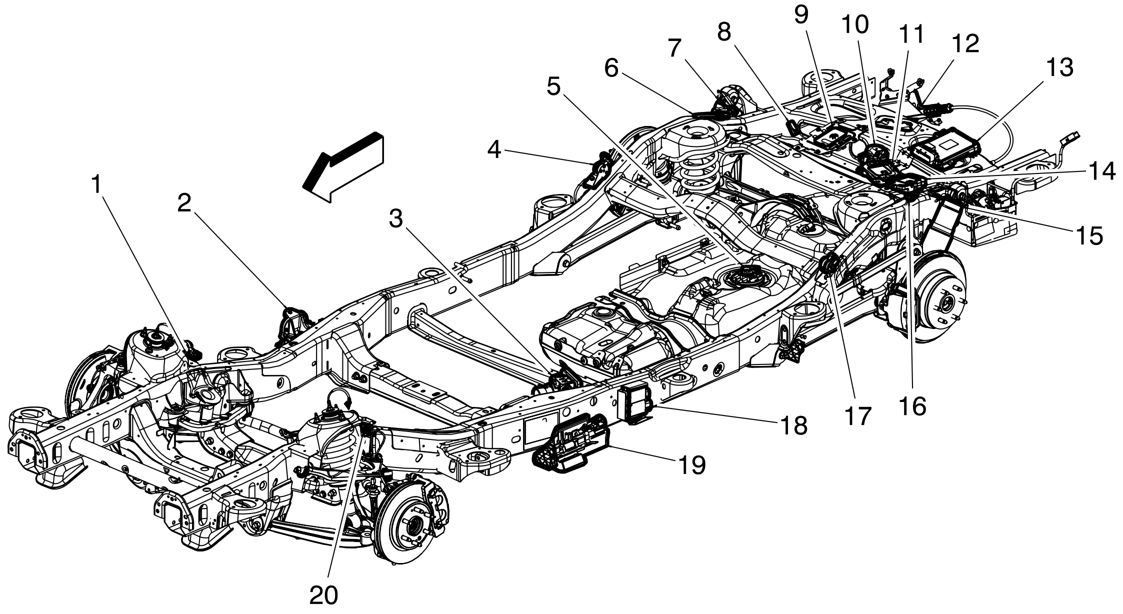
Tail Lamp Components (Z75)



Items

1. E5L Stop Lamp - Left (Z88, Z75, or X88 with T89)
2. E5E Tail Lamp - Left
3. K174L Multifunction LED Control Module - Left Tail Lamp (Z75 or Z88)
4. E5F Tail Lamp - Right
5. E5R Stop Lamp - Right (Z88, Z75, or X88 with T89)
6. E5B Backup Lamp - Right
7. E4RR Turn Signal Lamp - Right Rear (Z88, Z75, or X88 with T89)
8. K174L Multifunction LED Control Module - Left Tail Lamp (Z75 or Z88)
9. E4LR Turn Signal Lamp - Left Rear (Z88, Z75, or X88 with T89)
10. E5A Backup Lamp - Left

Chassis Components View



Items

1. B5RF Wheel Speed Sensor - Right Front
2. M95R Assist Step - Right (BRS)
3. K17 Electronic Brake Control Module
4. B152RR Suspension Position Sensor - Right Rear (Z95)
5. B150 Fuel Tank Pressure Sensor
6. B152RR Suspension Position Sensor - Right Rear (Z95)
7. Q37RR Shock Absorber Actuator - Right Rear (Z95)
8. R6A Terminating Resistor - High Speed Bus (without J71, JL1, Z85 or Z95)
9. K38 Chassis Control Module (JL1 or Z85)
10. Q13 Evaporative Emission Vent Solenoid Valve
11. K133 Trailer Brake Power Control Module (JL1)
12. K83 Park Brake Control Module (J71)
13. K19 Suspension Control Module (Z95)
14. K111 Fuel Pump Driver Control Module
15. Q37LR Shock Absorber Actuator - Left Rear (Z95)

15. Q67LR Shock Absorber Actuator - Left Rear (Z55)

16. B5LR Wheel Speed Sensor - Left Rear

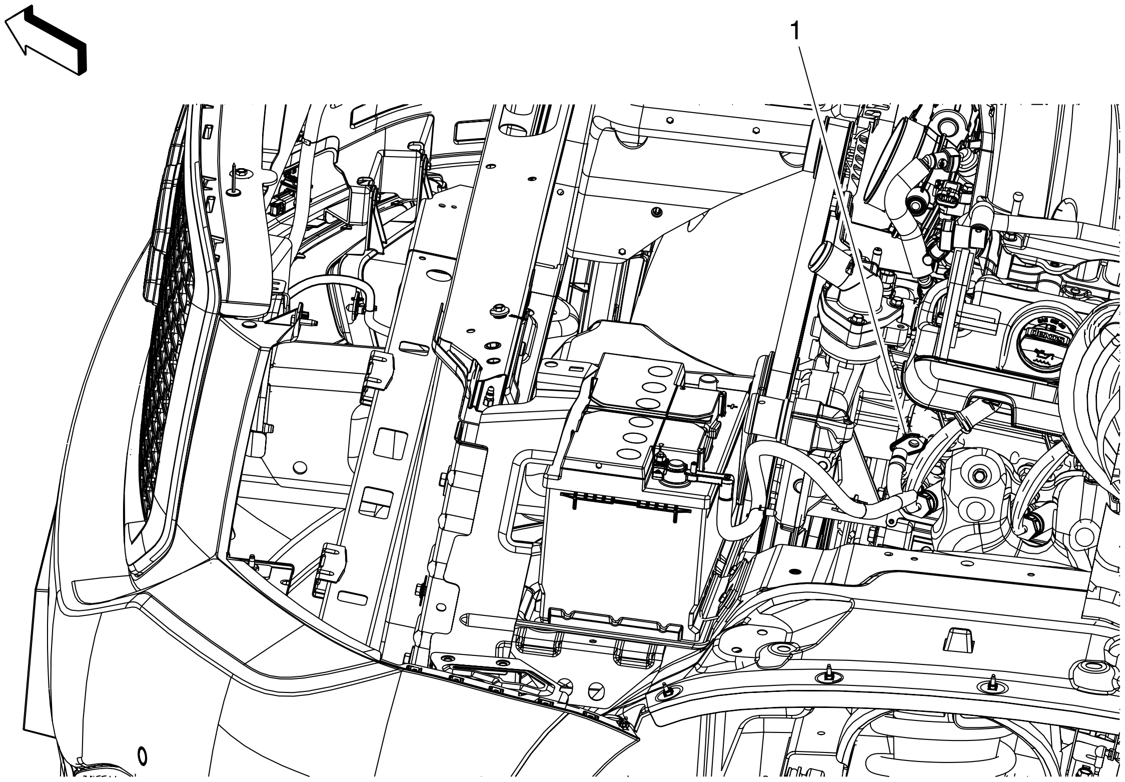
17. B152LR Suspension Position Sensor - Left Rear (Z95)

18. K4 Assist Step Control Module (BRS)

19. M95L Assist Step - Left (BRS)

20. B5LF Wheel Speed Sensor - Left Front

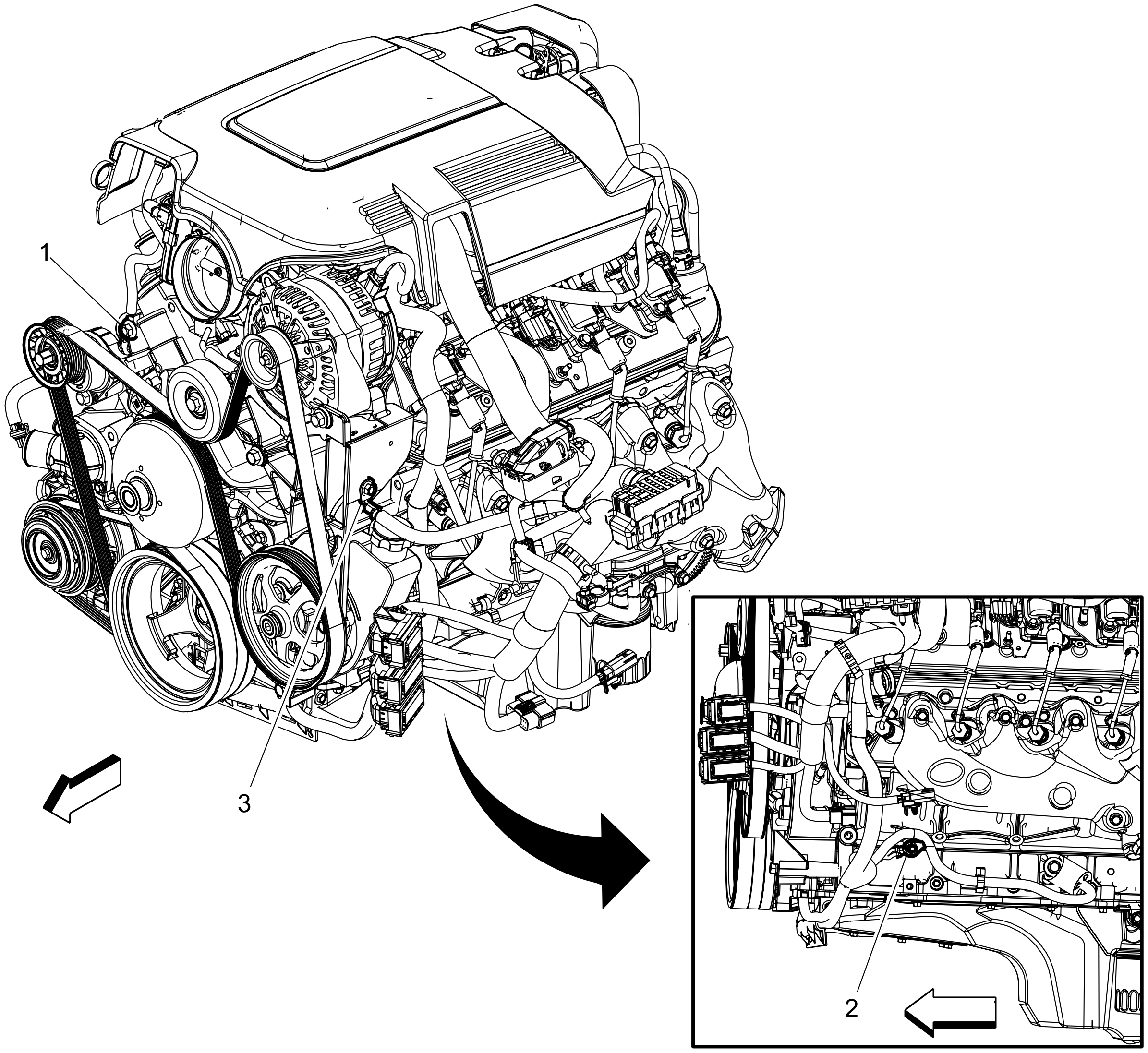
G100 (L83 with 5W4 or 9C1)



Items

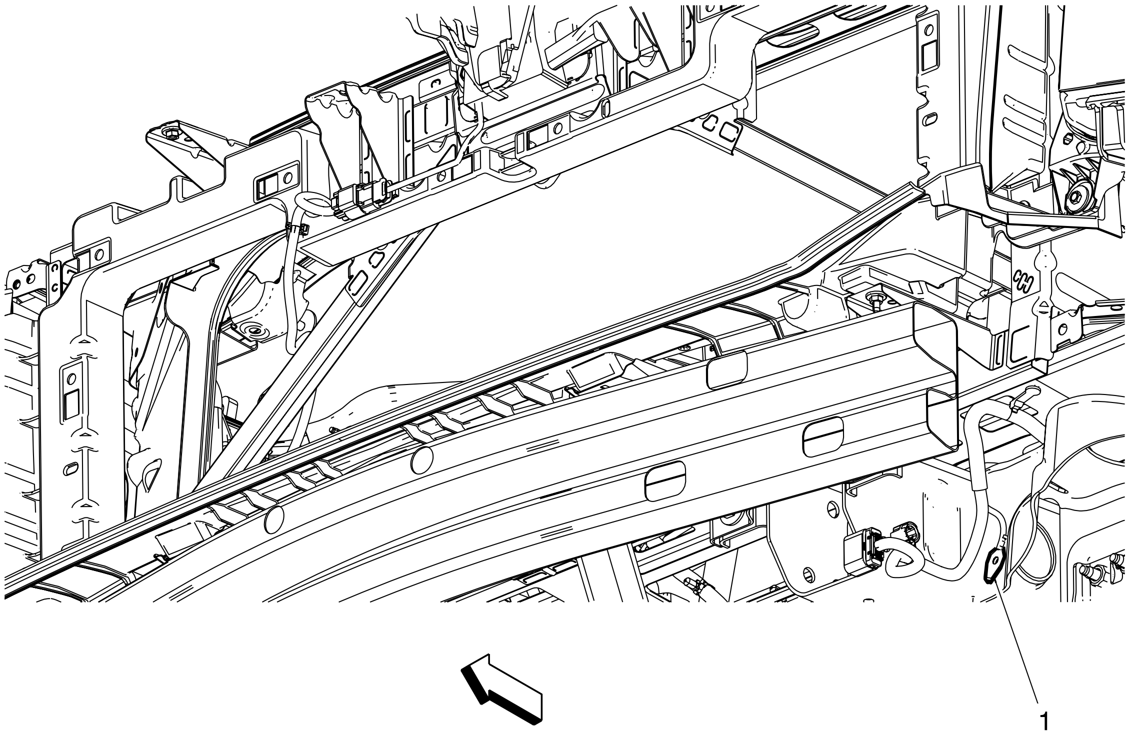
1. G100 (L96 or L83 with 5W4 or 9C1)

G100, G110 and G120 (L96)



Items

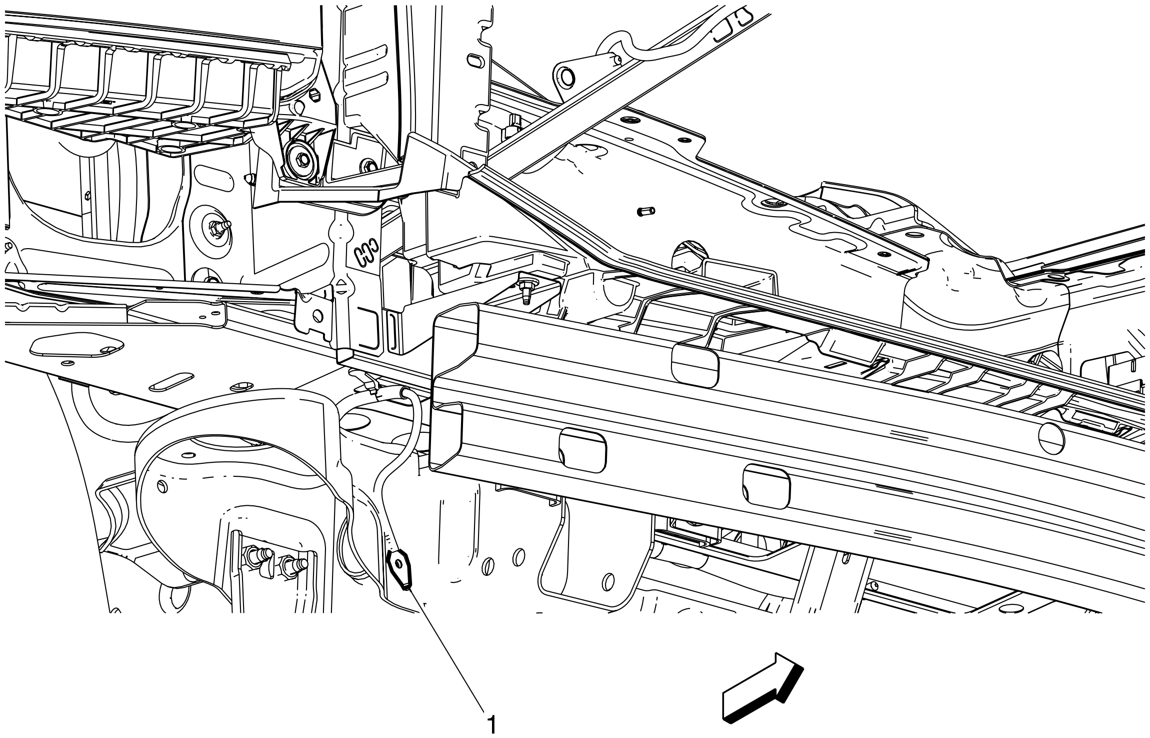
1. G120 (L96)
2. G110
3. G100 (L96 or L83 with 5W4 or 9C1)



Items

1. G101

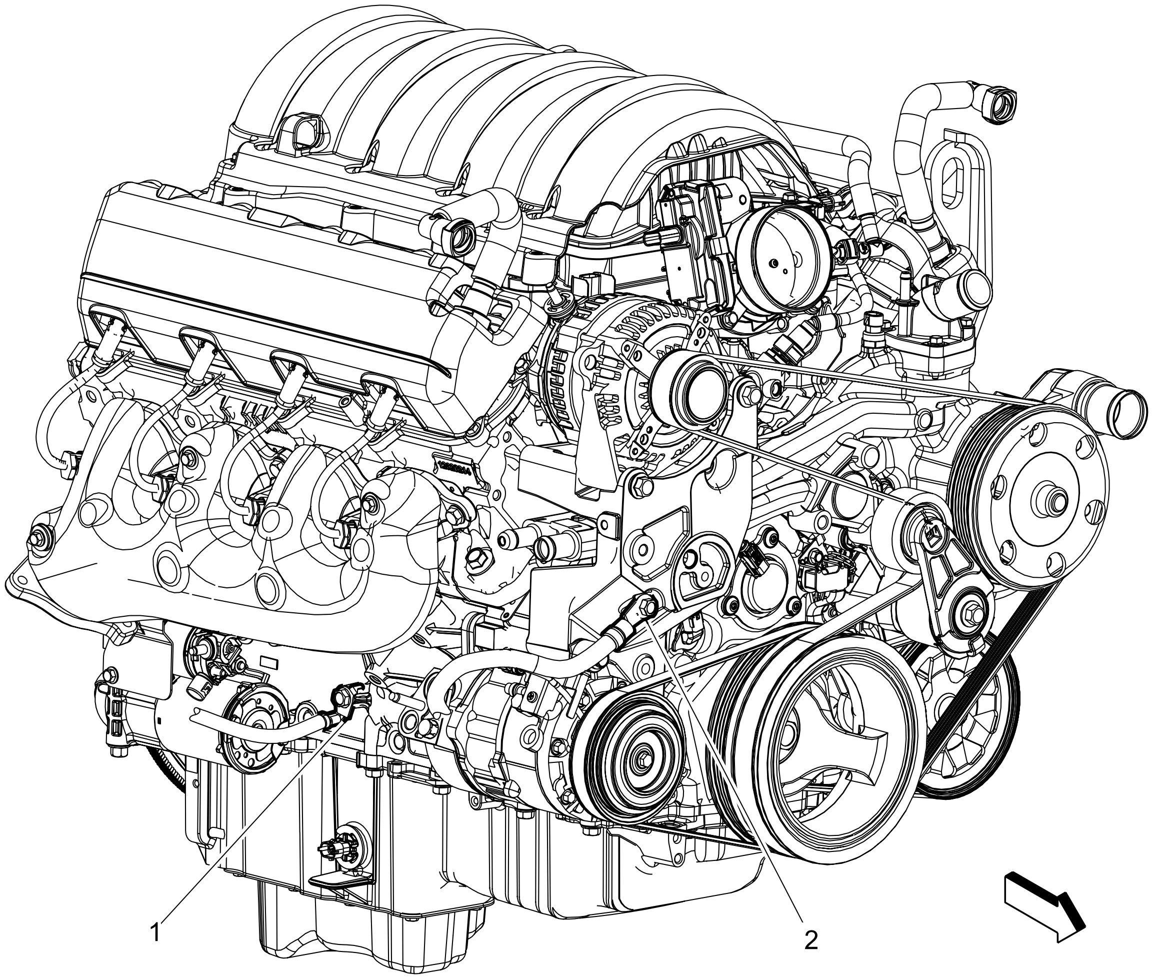
G102



Items

1. G102

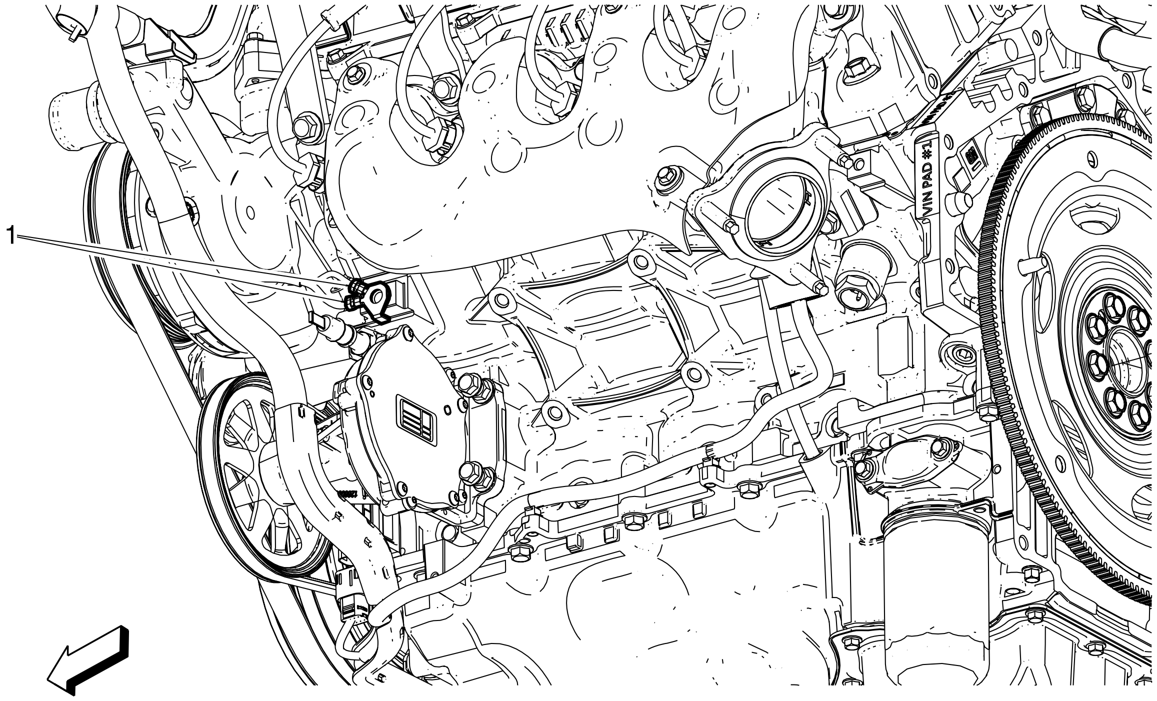
G103 and G125 (L83 or L86)



Items

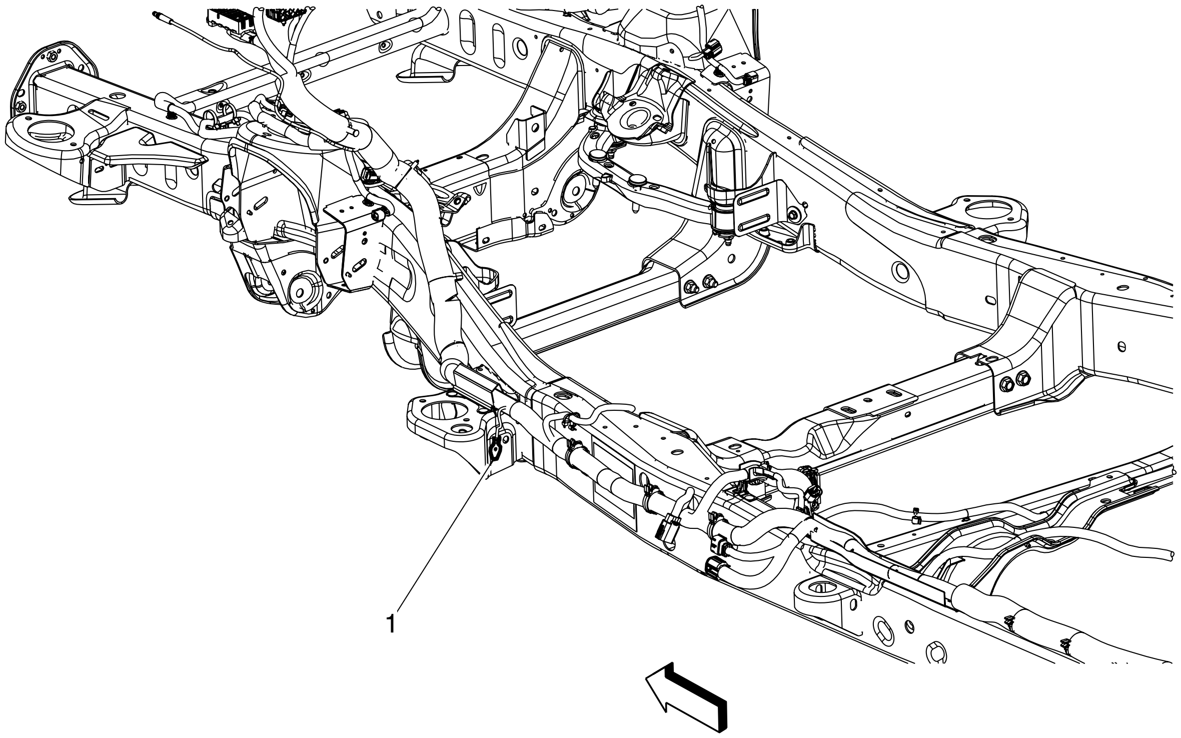
1. G103
2. G125 (L83 or L86)

G110 (L83 or L86)



Items

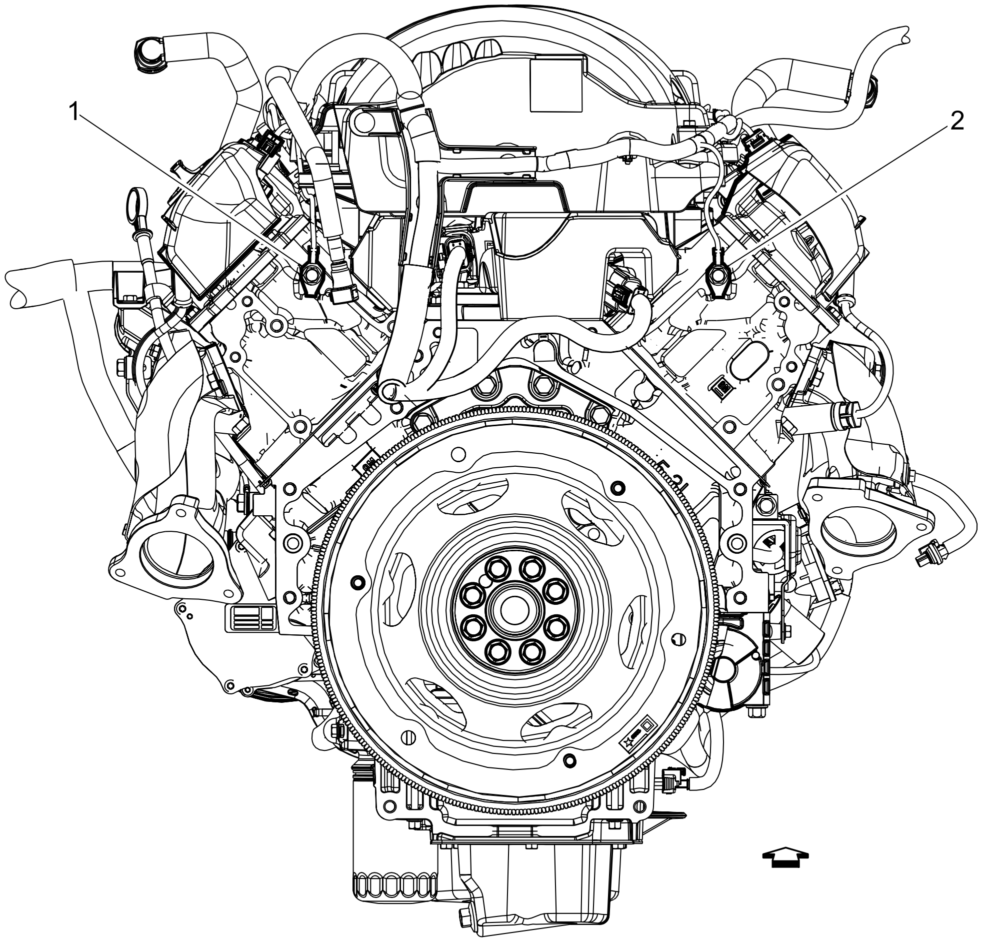
1. G110



Items

1. G121

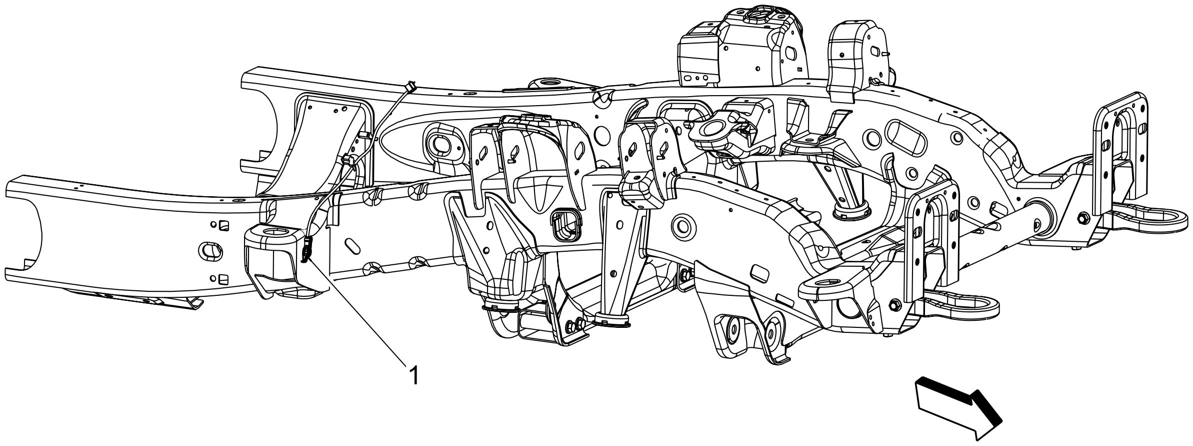
G130 and G140 (L83 or L86)



Items

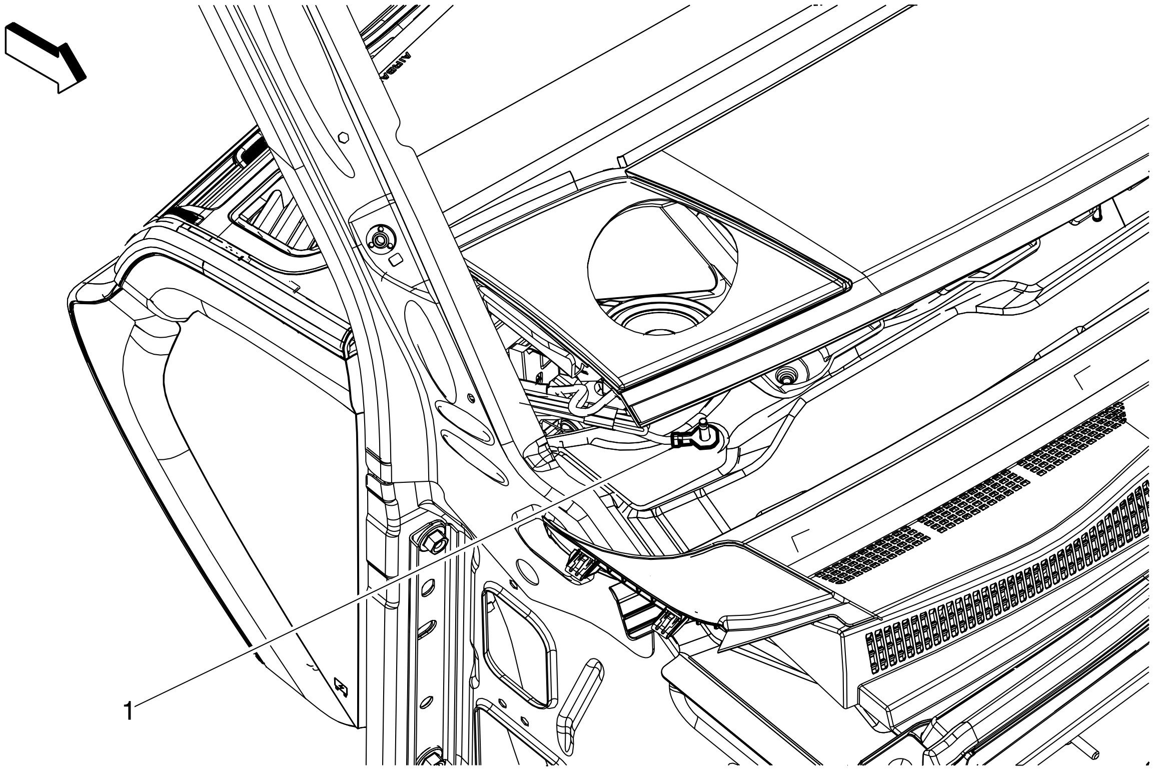
1. G130 (L83 or L86)
2. G140 (L83 or L86)

G141 (L83 or L86)



Items

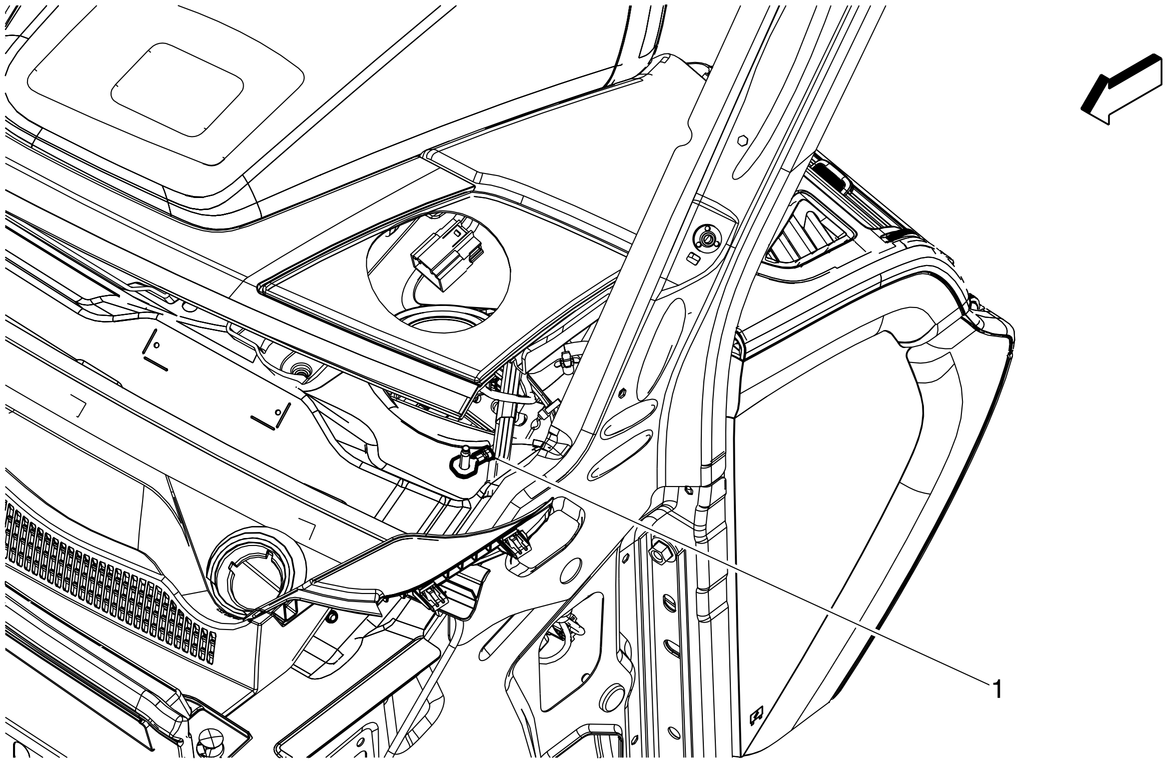
1. G141 (L83 or L86)



Items

1. G210

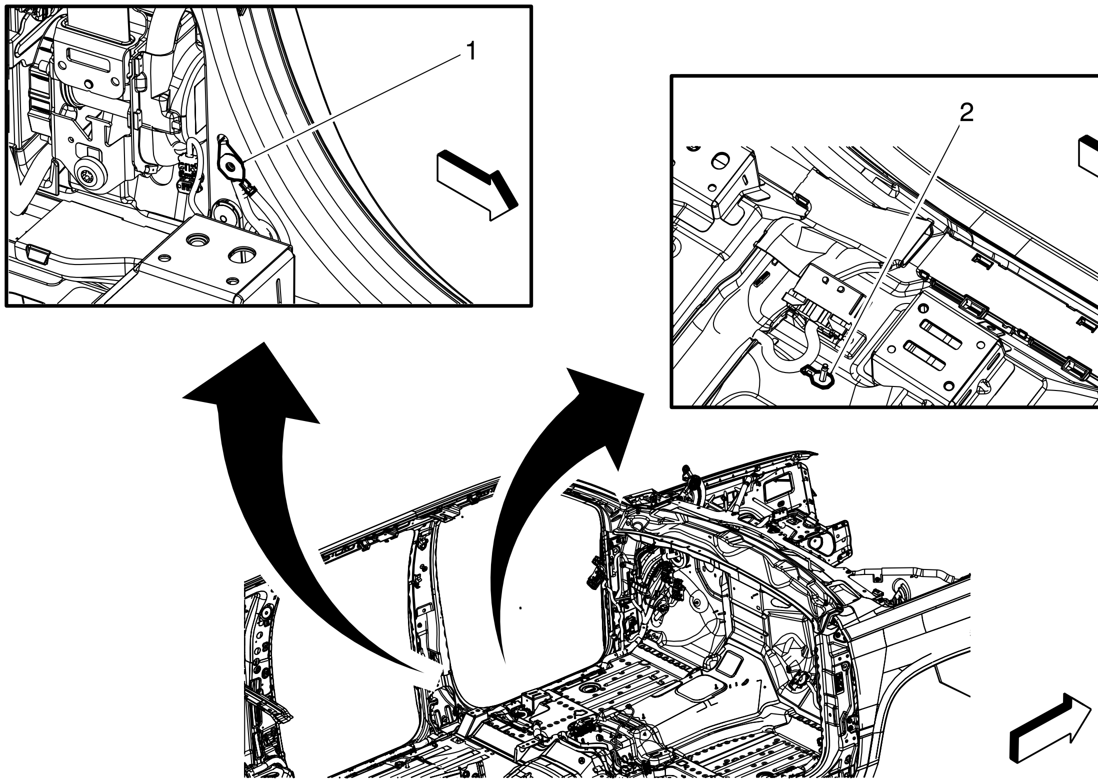
G218



Items

1. G218

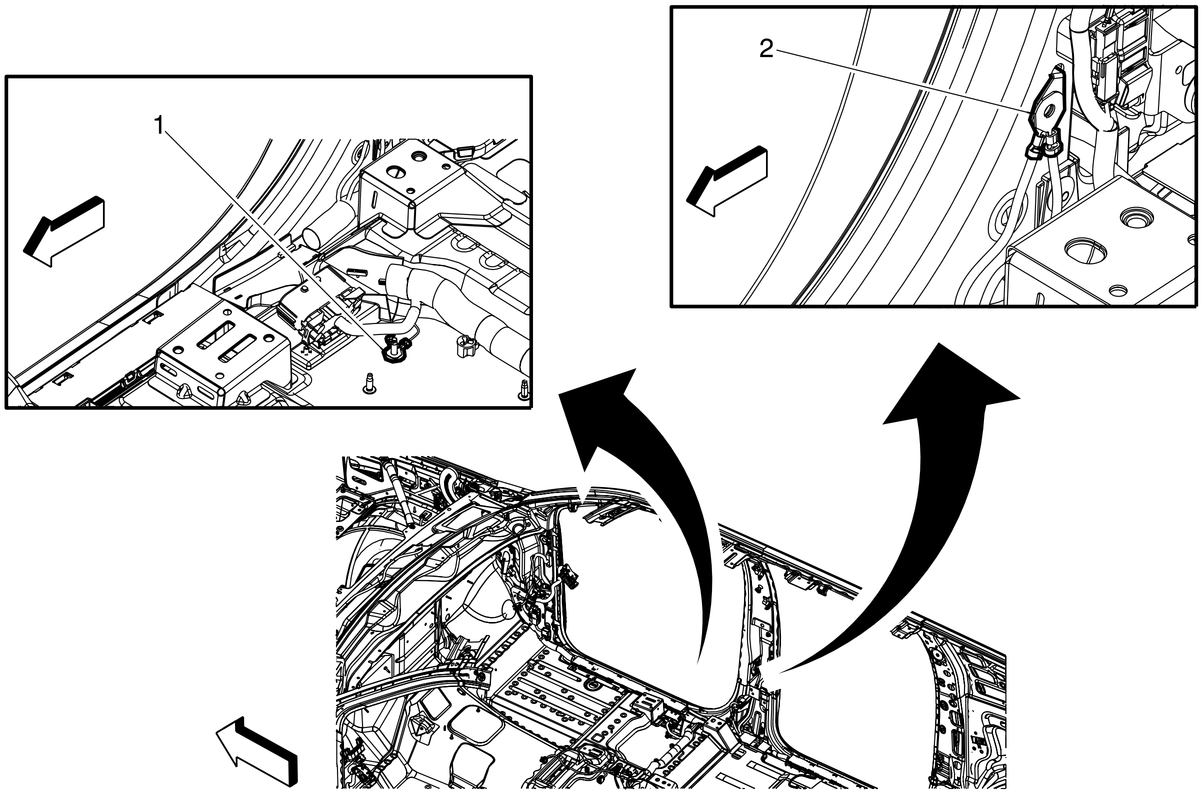
G311 and G325



Items

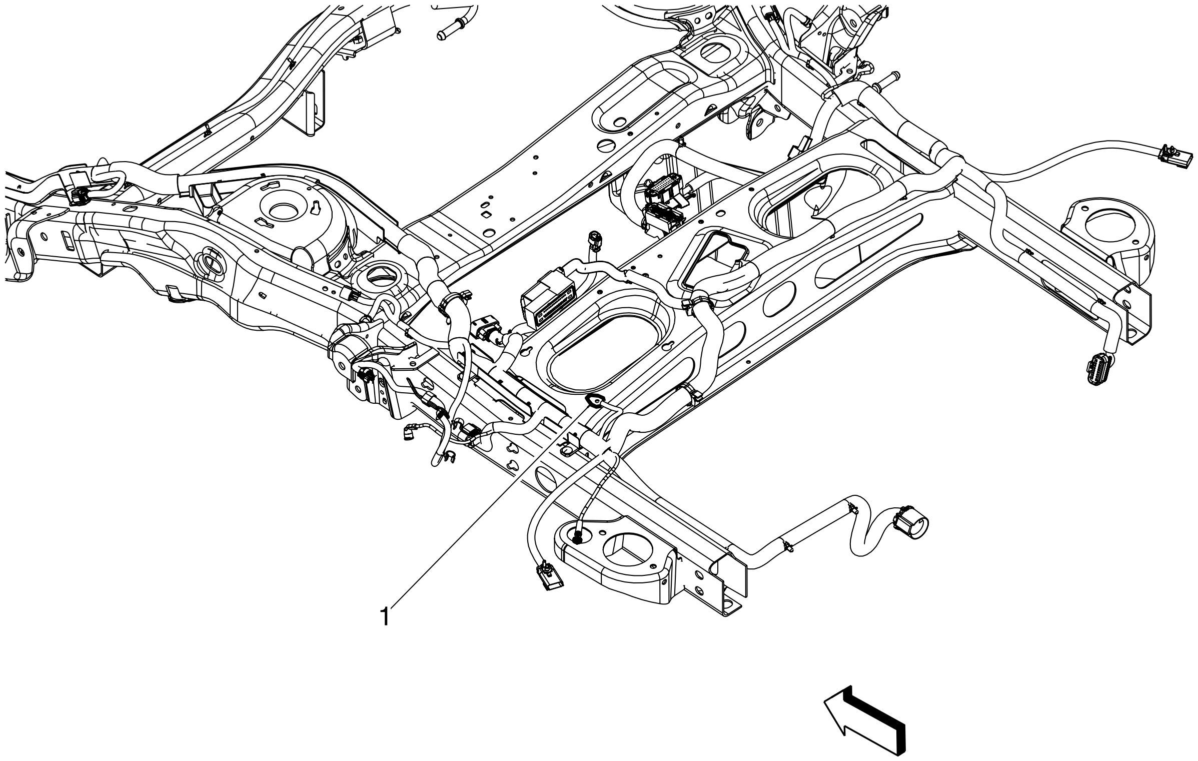
1. G311
2. G325

G312 and G327



Items

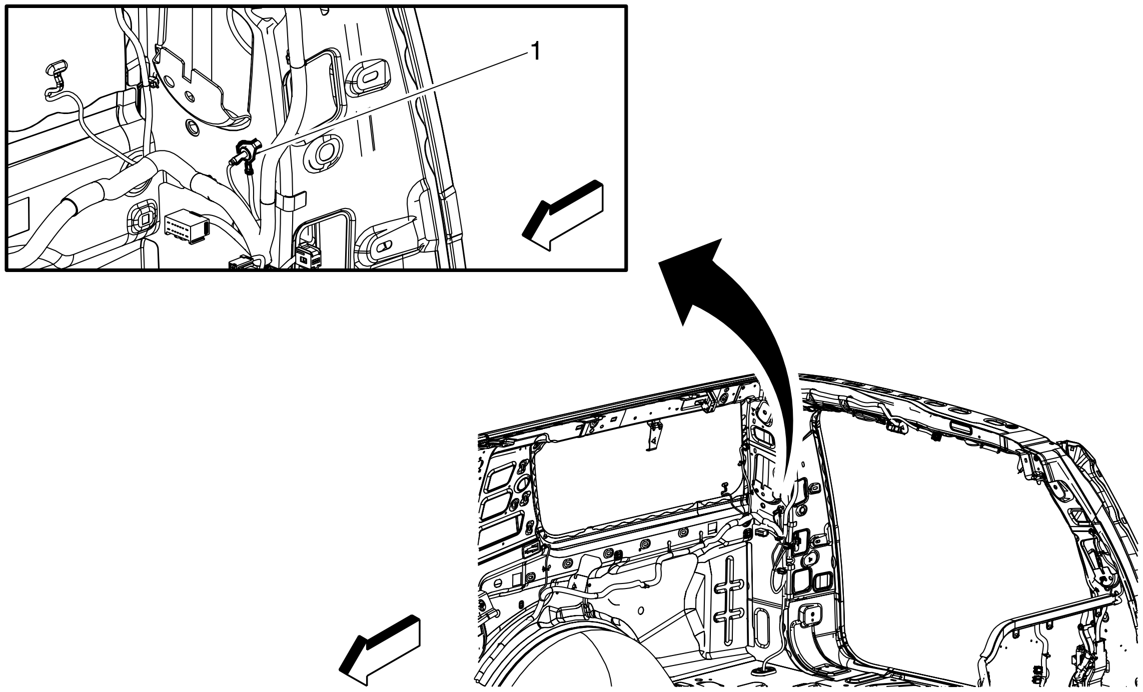
1. G327
2. G312



Items

1. G400

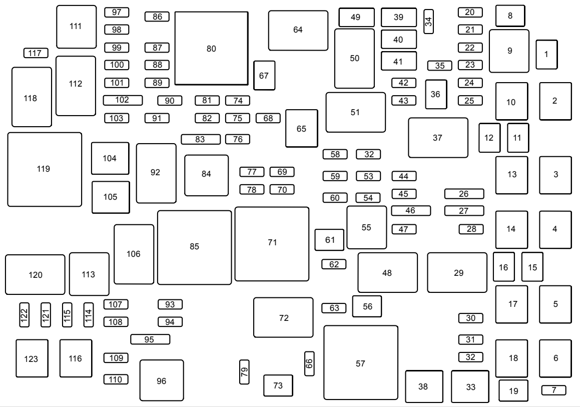
G402



Items

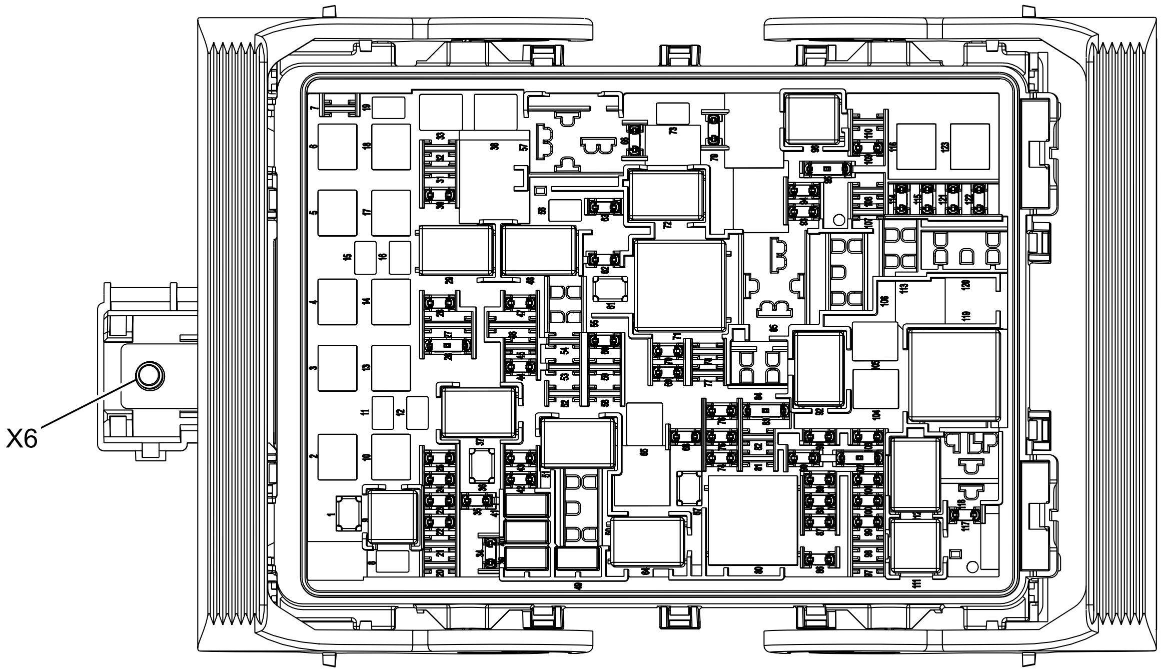
1. G402

X50A Fuse Block - Underhood Label


111
97
98
99
100
101
102
103
117
112
118
86
87
88
89
90
91
80
81
82
74
75
83
76
64
67
68
65
49
50
51
39
40
41
34
42
43
35
36
37
20
21
22
23
24
25
8
9
1
10
2
12
11
119
104
105
92
84
77
78
69
70
58
59
60
32
53
54
44
45
46
47
26
27
28
13
3
14
4
106
85
71
61
55
62
48
29
16
15
120
113
122
121
115
114
107
108
93
94
95
72
63
56
30
31
32
17
5
18
6
123
116
109
110
96
79
73
66
57
38
33
19
7

1	30A ELEC RNG BDS
2	60A ABS PUMP
3	60A INT BEC LT1
4	40A MSB PASS
5	40A SUSP LEVELING CMPRSR
6	30 4WD TREC
9	FUEL PUMP RLY
10	40A ELEC PRK BRK
13	60A INT BEC LT2
14	60A REAR BEC1
17	40A MSB DRVR
21	15A ALC EXH SOL
22	20A FUEL PUMP
23	10A ICCM
24	30A RTD
25	30A FPPM
26	AHA_RVC
28	30A UPFIT 2
29	UPFIT 2 RLY
30	25A WPR
31	25A TIM
34	10A BCK UP LP
35	25A ABS VLV
36	30A TRLR BRK
37	UPFIT 3 RLY
39	10A TRLR STOP TRN RT
40	10A TRKR STOP TRB LT
41	20A PRK LP TRLR
42	15A PRK LP RT
43	15A PRK LP LT
44	30A UPFIT 3
45	10A ALC RUN/CRANK
47	30A UPFIT 4
48	UPFIT 4 RLY
49	10A REV LP
51	PRK LP RLY
59	20A EURO TRLR
60	10A A/C CONTRL
63	30A UPFIT 1
64	SEC FUEL PUMP RLY
67	30A TRLR BATT
69	5A RC UPFIT 3 & 4
70	5A VBAT UPFIT 3 & 4
72	UPFIT 1 RLY
74	15A ECM IGN
75	10A MISC IGN SPARE
76	15A TRANS IGN
77	5A RC UPFIT 1 & 2
78	5A VBAT UPFIT 1 & 2
83	10A EURO TRLR RC
84	RUN/CRNK RLY
87	15A ENG
88	20A INJ A ODD
89	20A INJ B EVEN
90	15A O2 B SNSR
91	15A THROT CONT
92	ECM RELAY
93	15A HORN
94	15A FOG LP
95	10A LT/RT HI BEAM
100	15A O2 A SNSR
101	30A ECM
102	15A ECM/TCM
103	10A INT HTR AUX
104	40A STRTR
107	10A AERO SHUTTER
109	10A POLICE UPFIT
112	STRTR RLY
114	15A FRT WSW
115	15A RR WSW
116	40A COOL FAN LT
121	20A RT HID
122	20A LT HID
123	40A COOL FAN RT

X50A Fuse Block - Underhood Top View



X50A Fuse Block - Underhood Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	ELEC RNG BDS	F1UA	30A	•
2	ABS PUMP	F2UA	60A	•
3	INT BEC LT1	F3UA	60A	•
4	MSB PASS	F4UA	40A	•
5	SUSP LEVELING CMPRSR	F5UA	40A	•
6	4WD TREC	F6UA	30A	• •
7	—	F7UA	—	•
8	—	F8UA	—	•
10	ELEC PRK BRK	F10UA	40A	•
11	—	F11UA	—	•
12	—	F12UA	—	•

13	INT BEC LT2	F13UA	60A	•
14	REAR BEC1	F14UA	60A	•
15	—	F15UA	—	•
16	—	F16UA	—	•
17	MSB DRVR	F17UA	40A	•
18	—	F18UA	—	•
19	—	F19UA	—	•
20	—	F20UA	—	•
21	ALC EXH SOL	F21UA	15A	•
22	FUEL PUMP	F22UA	20A	• •
23	ICCM	F23UA	10A	•
24	RTD	F24UA	30A	•
25	FPPM	F25UA	30A	•
26	AHA_RVC	F26UA	5A	•
27	-	F27UA	—	•
28	UPFIT 2	F28UA	30A	•
30	WPR	F30UA	25A	• •
31	TIM	F31UA	25A	•
32	—	F32UA	—	•
33	—	F33UA	—	•
34	BCK UP LP	F34UA	10A	• • • •
35	ABS VLV	F35UA	25A	•
36	TRLR BRK	F36UA	30A	• •

				•
38	—	F38UA	—	•
39	TRLR STOP TRN RT	F39UA	10A	•
40	TRLR STOP TRN LT	F40UA	10A	•
41	PRK LP TRLR	F41UA	20A	•
42	PRK LP RT	F42UA	15A	• • • • • •
43	PRK LP LT	F43UA	15A	• • • • • •
44	UPFIT 3	F44UA	30A	•
45	ALC RUN/CRANK	F45UA	10A	•
46	—	F46UA	—	•
47	UPFIT 4	F47UA	30A	•
49	REV LP	F49UA	10A	•
52	—	F52UA	—	•
53	—	F53UA	—	•
54	—	F54UA	—	•
56	—	F56UA	—	•
58	—	F58UA	—	•
59	EURO TRLR	F59UA	20A	•
60	A/C CONTRL	F60UA	10A	•
61	—	F61UA	—	•
62	—	F62UA	—	•

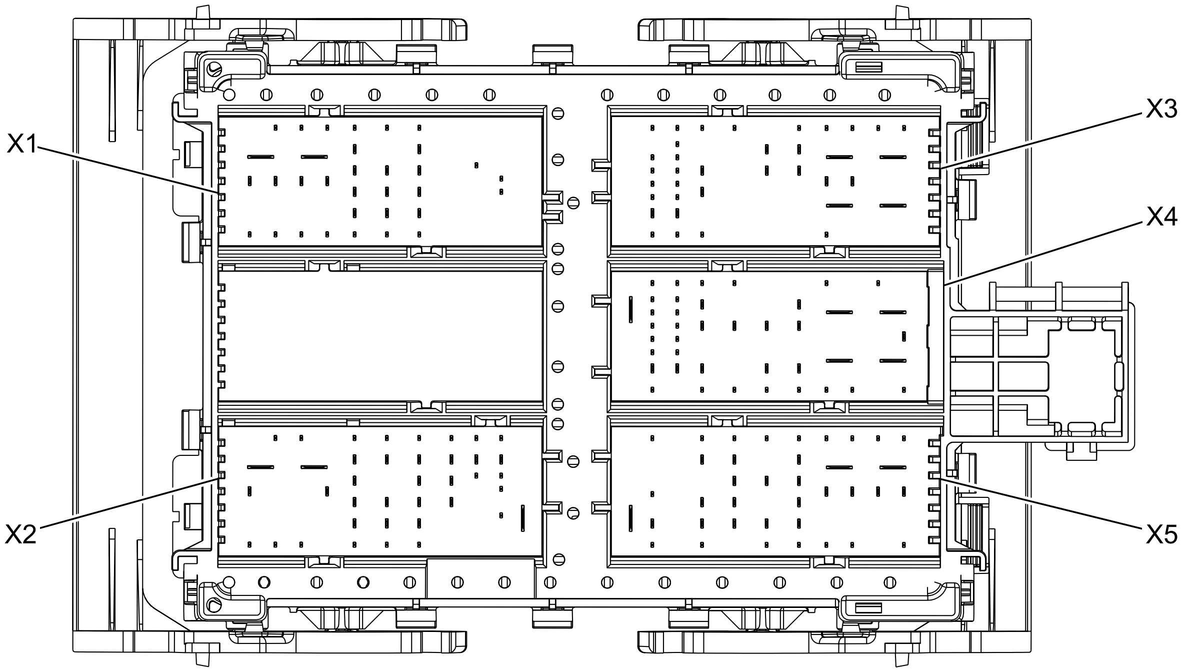
62	—	F62UA	—	•
63	UPFIT 1	F63UA	30A	•
65	—	F65UA	—	•
66	—	F66UA	—	•
67	TRLR BATT	F67UA	30A	•
68	SEC FUEL PUMP	F68UA	20A	• •
69	RC UPFIT 3 & 4	F69UA	5A	• •
70	VBAT UPFIT 3 & 4	F70UA	5A	• •
73	—	F73UA	—	•
74	ECM IGN	F74UA	15A	• • •
75	MISC IGN SPARE	F75UA	10A	•
76	TRANS IGN	F76UA	15A	• •
77	RC UPFIT 1 & 2	F77UA	5A	• •
78	VBAT UPFIT 1 & 2	F78UA	5A	• •
79	—	F79UA	—	•
81	—	F81UA	—	•
82	—	F82UA	—	•
83	EURO TRLR RC	F83UA	10A	•
86	—	F86UA	—	•
87	ENG	F87UA	15A	• •
88	INJ A ODD	F88UA	20A	• •

				• • • • • • • •
89	INJ B EVEN	F89UA	20A	• • • • • • • • •
90	O2 B SNSR	F90UA	15A	• •
91	THROT CONT	F91UA	15A	• • •
93	HORN	F93UA	15A	•
94	FOG LP	F94UA	15A	• •
95	LT/RT HI BEAM	F95UA	10A	• • • •
97	—	F97UA	—	•
98	—	F98UA	—	•
99	—	F99UA	—	•
100	O2 A SNSR	F100UA	15A	• • • • •

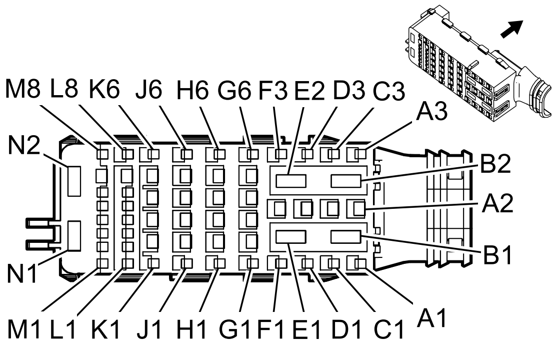
				•
101	ECM	F101UA	30A	•
102	ECM/TCM	F102UA	15A	• •
103	INT HTR AUX	F103UA	10A	• •
104	STRTR	F104UA	40A	•
105	—	F105UA	—	•
107	AERO SHUTTER	F107UA	10A	•
108	—	F108UA	—	•
109	POLICE UPFIT	F109UA	10A	•
110	—	F110UA	—	•
114	FRT WSW	F114UA	15A	•
115	RR WSW	F115UA	15A	•
116	COOL FAN LT	F116UA	40A	•
117	—	F117UA	—	•
121	RT HID	F121UA	20A	•
122	LT HID	F122UA	20A	•
123	COOL FAN RT	F123UA	40A	•
9	FUEL PUMP RLY	KR23A Fuel Pump Relay	—	•
29	UPFIT 2 RLY	KR161B Configurable Provision Relay 2	—	•
37	UPFIT 3 RLY	KR161C Configurable Provision Relay 3	—	•
48	UPFIT 4 RLY	KR161D Configurable Provision Relay 4	—	•
50	—	—	—	• Not Used
51	PRK LP RLY	KR53 Park Lamps Relay	—	• • •

55	—	—	—	• Not Used
57	—	—	—	• Not Used
64	SEC FUEL PUMP RLY	KR23B Fuel Pump Relay — Secondary	—	•
71	—	—	—	• Not Used
72	UPFIT 1 RLY	KR161A Configurable Provision Relay 1	—	•
80	—	—	—	• Not Used
84	RUN/CRNK RLY	KR73 Ignition Main Relay	—	• • • • • •
85	—	—	—	• Not Used
92	ECM RLY	KR75 Engine Controls Ignition Relay	—	• • • • • • •
96	—	—	—	• Not Used
106	—	—	—	• Not Used
111	—	—	—	• Not Used
112	STRTR RLY	KR27 Starter Relay	—	•
113	—	—	—	• Not Used
118	—	—	—	• Not Used
119	—	—	—	• Not Used
120	—	—	—	• Not Used
—	—	KR3 Horn Relay	—	• F93UA

—	—	KR6 Rear Window Washer Pump Relay	—	• F115UA
—	—	KR11 Windshield Washer Pump Relay	—	• F114UA
—	—	KR12B Windshield Wiper Relay	—	• KR12C Windshield Wiper Speed Control Relay
—	—	KR12C Windshield Wiper Speed Control Relay	—	• M75 Windshiled Wiper Motor
—	—	KR29 A/C Compressor Clutch Relay	—	• Q2 A/C Compressor Clutch
—	—	KR46 Front Fog Lamp Relay	—	• F94UA (T3U)
—	—	KR48 Headlamp High Beam Relay	—	• F95UA
—	—	KR49 Headlamp Low Beam Relay	—	• F121UA (T4F) • F122UA (T4F)
—	—	KR61 Trailer Backup Lamps Relay	—	• F34UA • F49UA
—	—	KR63L Trailer Stop/Turn Signal Lamp Relay - Left	—	• F40UA
—	—	KR63R Trailer Stop/Turn Signal Lamp Relay - Right	—	• F39UA
TP1	—	TP1	—	•
TP2	—	TP2	—	•


X1
X2
X3
X4
X5

X50A Fuse Block - Underhood X1



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33116190

Service Connector: 19329923

Description: 58-Way F 1.5, 2.8, 800 Metri-Pack Series (BN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575544	J-35616-35 (VT)	J-38125-12A	1326030-6	Lear 17	E	C
II	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

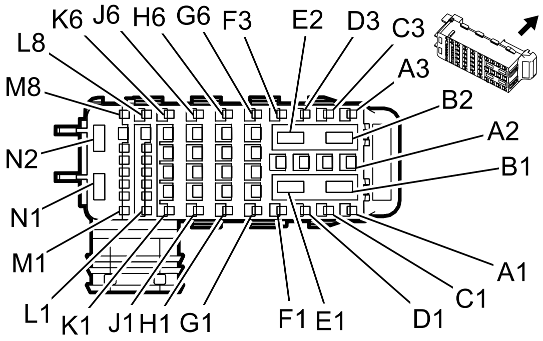
X50A Fuse Block - Underhood X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	0.75	YE	712	Left Headlamp Low Beam Control	III	—
A3 - B1	—	—	—	Not Occupied	—	—
B2	4	RD/GY	642	Battery Positive Voltage	II	—
C1	—	—	—	Not Occupied	—	—
C2	0.75	YE	312	Right Headlamp Low Beam Control	III	—
C3	—	—	—	Not Occupied	—	—
D1	0.75	YE	712	Left Headlamp Low Beam Control	IV	—

D2	0.75	D-BU/VT	392	Rear Window Washer Pump Control	III	—
D3	0.75	GN/VT	1315	Right Front Turn Signal Lamp Control	IV	—
E1	—	—	—	Not Occupied	—	—
E2	4	RD/WH	342	Battery Positive Voltage	II	—
F1	0.5	GY/BN	309	Right Park Lamp Control	IV	—
F2	0.75	GY/VT	228	Windshield Washer Pump Control	III	—
F3	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	IV	—
G1	0.5	VT/GY	709	Left Park Lamp Control	IV	—
G2 - G3	—	—	—	Not Occupied	—	—
G4	0.75	BK	150	Ground	III	—
G5	0.75	RD/D-BU	3940	Battery Positive Voltage	I	—
G6	—	—	—	Not Occupied	—	—
H1	0.5	YE/GY	57	Left Cornering Lamp Control	IV	—
H2	0.75	GY/D-BU	7538	Left Front DRL Control	III	—
H3	0.75	D-BU/BN	7539	Right Front DRL Control	III	—
H4	0.5	WH	311	Right Headlamp High Beam Control	III	—
	0.75	WH	311	Right Headlamp High Beam Control	I	—
H5	—	—	—	Not Occupied	—	—

H6	0.75	D-BU/BN	7539	Right Front DRL Control	IV	—
J1	0.5	YE/WH	58	Right Cornering Lamp Control	IV	—
J2	0.75	BN/GY	29	Horn Control	III	—
J3	0.5	BN/VT	2234	Front Fog Lamp Control	III	—
J4	0.5	WH	711	Left Headlamp High Beam Control	III	—
	0.75	WH	711	Left Headlamp High Beam Control	I	—
J5	0.75	YE	312	Right Headlamp Low Beam Control	III	—
J6	0.75	GY/D-BU	7538	Left Front DRL Control	IV	—
K1 - M3	—	—	—	Not Occupied	—	—
M4	0.5	WH/D-BU	3203	Right Headlamp Bulb Outage Signal	IV	—
M5	0.5	D-BU/VT	3204	Left Headlamp Bulb Outage Signal	IV	—
M6 - N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X2



Connector Part Information

Harness Type: Engine

OEM Connector: 33116191

Service Connector: 19332891

Description: 58-Way F 1.5, 2.8, 800 Metri-Pack Series (GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X50A Fuse Block - Underhood X2

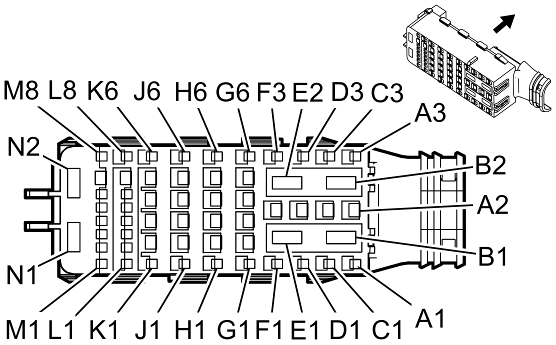
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	IV	—
A2	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
A3 - B2	—	—	—	Not Occupied	—	—
C1	0.75	BN/GN	59	A/C Compressor Clutch Control	IV	—
C2	—	—	—	Not Occupied	—	—
C3	0.5	GY/BN	2410	—	IV	—
D1 - D2	—	—	—	Not Occupied	—	—
D3	0.5	YE/BK	625	Starter Enable Relay Control	IV	—

E1	—	—	—	Not Occupied	—	—
E2	4	YE	6	Starter Solenoid Crank Ignition Voltage	I	—
F1	—	—	—	Not Occupied	—	—
F2	2.5	BK	550	Ground	III	—
	2.5	BK	550	Ground	II	—
F3 - G2	—	—	—	Not Occupied	—	—
G3	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	II	—
	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	III	—
G4	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	III	—
G5	0.75	RD/GN	1840	Battery Positive Voltage	II	—
	1.5	RD/GN	1840	Battery Positive Voltage	III	—
G6	0.5	RD/WH	3440	Battery Positive Voltage	IV	—
H1	0.5	GN/GY	465	Fuel Pump Primary Relay Control	IV	—
H2	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	III	—
	1.5	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	—
H3	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	II	—
H4	—	—	—	Not Occupied	—	—
H5	0.5	RD/BN	440	Battery Positive Voltage	II	—
H6	0.5	YE	5991	Powertrain Relay Coil Control	IV	—

				Powertrain Relay Coil Control	IV	
J1	—	—	—	Not Occupied	—	—
J2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	II	—
J3	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	III	—
J4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	III	—
	1.5	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	—
J5	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	II	—
J6	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	IV	—
K1 - K2	—	—	—	Not Occupied	—	—
K3	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	—
K4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	III	—
K5	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	—
K6 - L6	—	—	—	Not Occupied	—	—
L7	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
L8	—	—	—	Not Occupied	—	—
M1	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	IV	—
M2 - M4	—	—	—	Not Occupied	—	—
M5	0.5	GY	5660	Fuel Pump Controller Data Out Signal	IV	—
M6	0.75	BK/WH	451	Signal Ground	IV	—

M7	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
M8	—	—	—	Not Occupied	—	—
N1	2.5	RD/GN	742	Battery Positive Voltage	I	—
N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X3



Connector Part Information

Harness Type: Body

OEM Connector: 33116188

Service Connector: 19332892

Description: 58-Way F 1.5, 2.8, 800 Metri-Pack Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12092445	Delphi 18	G	G
II	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

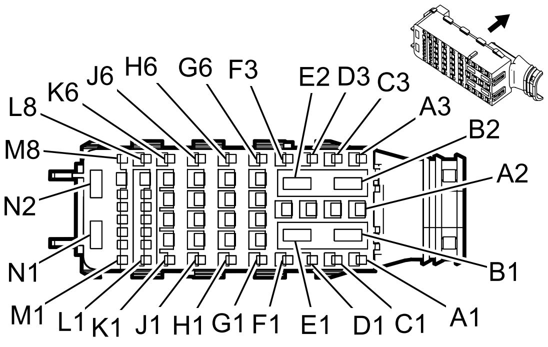
X50A Fuse Block - Underhood X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	V	—
A2 - A3	—	—	—	Not Occupied	—	—
B1	4	RD/GY	1342	Battery Positive Voltage	I	—
B2	2.5	RD/D-BU	1842	Battery Positive Voltage	II	—
C1	0.5	BN/GN	19	Right Rear Stop/Turn Lamp Control	V	—
C2 - C3	—	—	—	Not Occupied	—	—
D1	0.75	GN/VT	1315	Right Front Turn Signal Lamp Control	V	—

D2	0.5	WH/D-BU	3203	Right Headlamp Bulb Outage Signal	III	—
D3 - E1	—	—	—	Not Occupied	—	—
E2	4	RD/WH	4042	Battery Positive Voltage	II	—
F1	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	V	—
F2	0.5	D-BU/VT	3204	Left Headlamp Bulb Outage Signal	III	—
F3	0.5	YE/WH	962	—	V	—
G1	0.75	D-BU/BN	7539	Right Front DRL Control	V	—
G2 - H1	—	—	—	Not Occupied	—	—
H2	1	BK	550	Ground	III	—
H3 - H6	—	—	—	Not Occupied	—	—
J1	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	V	—
J2 - K2	—	—	—	Not Occupied	—	—
K3	1	YE/BN	95	Windshield Wiper Motor Low Speed Control	III	—
K4	1	WH	92	Windshield Wiper Motor High Speed Control	III	—
K5	—	—	—	Not Occupied	—	—
K6	0.35	BN/GY	2268	Windshield Washer Relay Control	V	—
L1	0.75	GY/D-BU	7538	Left Front DRL Control	V	—
L2	0.35	BN/VT	1969	Headlamp High Beam Relay Control	V	—

L3	0.35	GN/WH	2270	Rear Window Washer Relay Control	V	—
L4	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	V	—
L5	0.5	BN	1317	Fog Lamp Relay Control	V	—
L6	0.35	BN/WH	28	Horn Relay Control	V	—
L7	—	—	—	Not Occupied	—	—
L8	0.5	YE/GY	57	Left Cornering Lamp Control	V	—
M1	0.75	YE	312	Right Headlamp Low Beam Control	V	—
M2	—	—	—	Not Occupied	—	—
M3	0.5	YE/WH	58	Right Cornering Lamp Control	V	—
M4	0.75	D-BU/BN	7539	Right Front DRL Control	V	—
M5	0.5	RD/WH	961	—	V	—
M6	—	—	—	Not Occupied	—	—
M7	2.5	D-BU	965	—	IV	—
M8	0.35	VT/WH	239	Run/Crank Ignition 1 Voltage	V	—
N1 - N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X4



Connector Part Information

Harness Type: Body

OEM Connector: 33116186

Service Connector: 19332893

Description: 58-Way F 1.5, 2.8, 800 Metri-Pack Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	13575718	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

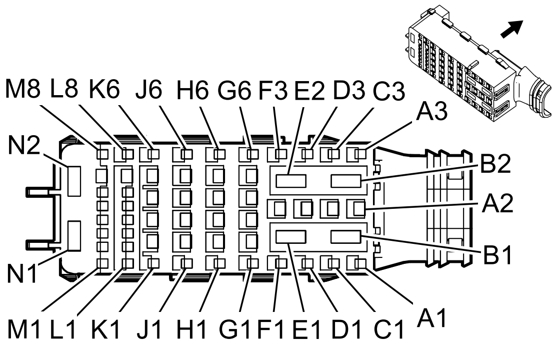
X50A Fuse Block - Underhood X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	0.75	GY/YE	7542	Left Rear Stop Lamp Control	III	—
A3	0.5	GN/WH	24	Backup Lamp Control	V	—
B1	4	RD/GY	1042	Battery Positive Voltage	I	—
B2	5	RD/VT	842	Battery Positive Voltage	I	—
C1	0.75	WH/YE	7541	Right Rear Stop Lamp Control	V	—
C2 - D3	—	—	—	Not Occupied	—	—

C2 - D5	—	—	—	Not Occupied	—	—
E1	6	RD/WH	942	—	II	—
E2	5	RD/D-BU	42	Battery Positive Voltage	I	—
F1 - G1	—	—	—	Not Occupied	—	—
G2	2.5	GY/BK	966	—	IV	—
G3 - G5	—	—	—	Not Occupied	—	—
G6	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	V	—
H1 - H4	—	—	—	Not Occupied	—	—
H5	2.5	RD/GN	242	Battery Positive Voltage	IV	—
	2.5	RD/GN	242	Battery Positive Voltage	III	—
H6	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	V	—
J1	0.75	GY/D-BU	7538	Left Front DRL Control	V	—
J2 - J5	—	—	—	Not Occupied	—	—
J6	0.75	BK/WH	451	Signal Ground	V	—
K1	0.75	YE	712	Left Headlamp Low Beam Control	V	—
K2	2.5	RD/GN	968	—	IV	—
K3 - K4	—	—	—	Not Occupied	—	—
K5	2.5	YE/BN	967	—	IV	—
K6	—	—	—	Not Occupied	—	—
L1	0.5	WH/D-BU	964	—	V	—

L2	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	V	—
L3	0.35	D-BU/BN	38	Backup Lamp Relay Control	V	—
L4	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	V	—
L5	0.35	D-BU	45	Park Lamp Relay Control	V	—
L6	0.5	GN/GY	963	—	V	—
L7 - L8	—	—	—	Not Occupied	—	—
M1	0.75	RD/YE	2340	Battery Positive Voltage	V	—
M2	—	—	—	Not Occupied	—	—
M3	0.35	BN/YE	1970	Headlamp Low Beam Relay Control	V	—
M4	—	—	—	Not Occupied	—	—
M5	0.35	GN/VT	5199	Run/Crank Relay Coil Control	V	—
M6 - N2	—	—	—	Not Occupied	—	—

X50A Fuse Block - Underhood X5



Connector Part Information

Harness Type: Chassis

OEM Connector: 33116189

Service Connector: 19332894

Description: 58-Way F 1.5, 2.8, 800 Metri-Pack Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	13575832	J-35616-4A (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

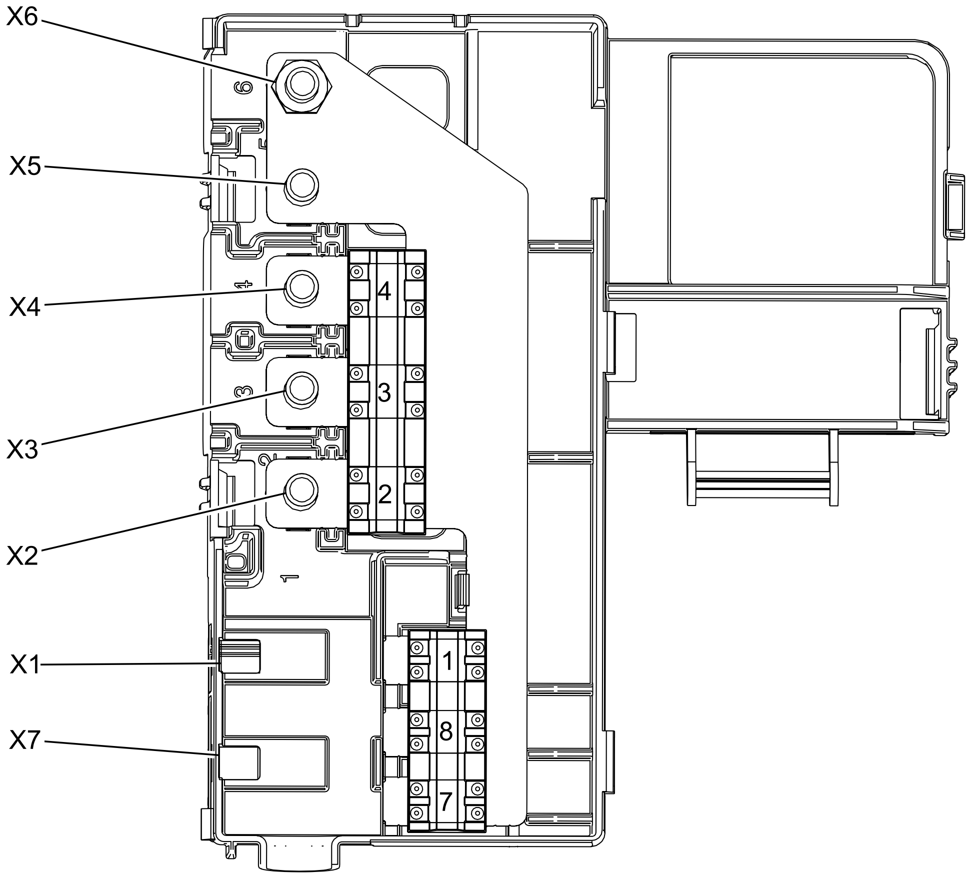
X50A Fuse Block - Underhood X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.75	GY/YE	7542	Left Rear Stop Lamp Control	V	—
A2	0.5	YE/GN	18	Left Rear Stop/Turn Lamp Control	IV	—
	0.5	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	IV	—
A3	0.5	BN/GN	19	Right Rear Stop/Turn Lamp Control	V	—
B1	5	RD/YE	442	Battery Positive Voltage	I	—
B2	—	—	—	Not Occupied	—	—
C1	0.75	GN	24	Backup Lamp Control	V	—

C1	0.75	GN	24	Backup Lamp Control	V	—
C2	2.5	RD/YE	1142	Battery Positive Voltage	IV	—
C3 - D1	—	—	—	Not Occupied	—	—
D2	1.5	GY	120	Fuel Pump Control	IV	—
D3	0.75	WH/YE	7541	Right Rear Stop Lamp Control	V	—
E1	4	RD/WH	1642	Battery Positive Voltage	I	—
E2 - F3	—	—	—	Not Occupied	—	—
G1	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	V	—
G2	2.5	RD/VT	1940	Battery Positive Voltage	IV	—
G3	3	RD/GN	2440	Battery Positive Voltage	III	—
G4	0.75	RD/WH	2040	Battery Positive Voltage	IV	—
G5	—	—	—	Not Occupied	—	—
G6	0.75	RD/GN	2440	Battery Positive Voltage	V	—
H1	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	V	—
H2	—	—	—	Not Occupied	—	—
H3	0.5	RD/GN	1840	Battery Positive Voltage	IV	—
H4 - J1	—	—	—	Not Occupied	—	—
J2	2.5	RD/GN	242	Battery Positive Voltage	IV	—
J3	1.5	GY/BN	2109	Trailer Park Lamp Control	IV	—

J4	2.5	RD/VT	1640	Battery Positive Voltage	IV	—
J5	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	IV	—
	0.75	VT/GN	439	Run/Crank Ignition 1 Voltage	IV	—
J6	—	—	—	Not Occupied	—	—
K1	0.5	VT/BK	739	Run/Crank Ignition 1 Voltage	V	—
K2	0.5	VT/GY	709	Left Park Lamp Control	IV	—
K3	—	—	—	Not Occupied	—	—
K4	0.5	GY/BN	309	Right Park Lamp Control	IV	—
K5	0.75	YE/GY	1618	Left Rear Trailer Stop/Turn Lamp Control	IV	—
K6	0.75	GN/VT	1619	Right Rear Trailer Stop/Turn Lamp Control	V	—
L1 - L6	—	—	—	Not Occupied	—	—
L7	2.5	GY	120	Fuel Pump Control	IV	—
L8 - M4	—	—	—	Not Occupied	—	—
M5	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	—
M6	—	—	—	Not Occupied	—	—
M7	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	IV	—
M8	0.75	WH/GN	1624	Trailer Backup Lamp Control	V	—
N1	—	—	—	Not Occupied	—	—
N2	4	RD/GN	742	Battery Positive Voltage	I	—

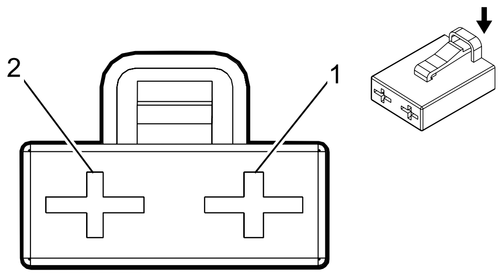
X50D Fuse Block - Battery Top View



X50D Fuse Block – Battery Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
1	—	F1UD	100A	•
2	—	F2UD	175A (L83 or L86) 250A (L96)	• •
3	—	F3UD	-	•
4	—	F4UD	175A	•
5	—	F7UD	60A	•
6	—	F8UD	60A	•

X50D Fuse Block - Battery X7



Connector Part Information

Harness Type: Body

OEM Connector: 13627842

Service Connector: 19329484

Description: 2-Way F 8.0 Series (BU)

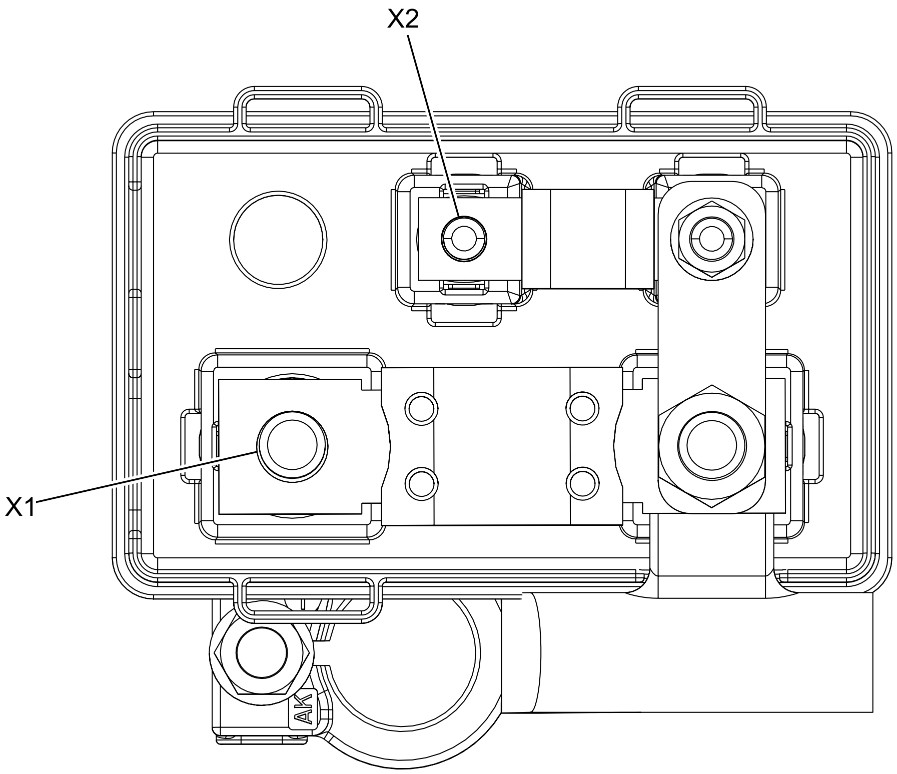
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-45 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X50D Fuse Block - Battery X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	6	RD/GY	142	Battery Positive Voltage	I	—
2	6	RD/GN	242	Battery Positive Voltage	I	—

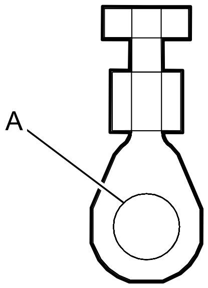
X50E Fuse Block - Battery Auxiliary Top View (5W4 or 9C1)

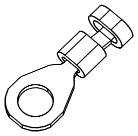


X50E Fuse Block – Battery Auxiliary Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
1	—	F1UE	100A	• •
2	—	F2UE	50A	•

X50E Fuse Block - Battery Auxiliary X1 (5WC/9C1)





Connector Part Information

Harness Type: Body

OEM Connector: 12103517

Service Connector: Service by Cable Assembly - See Part Catalog

Description: 1-Way Ring Terminal

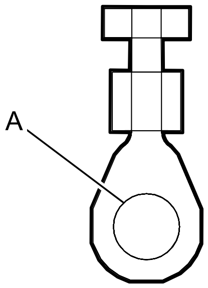
Terminal Part Information

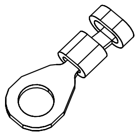
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X50E Fuse Block - Battery Auxiliary X1 (5WC/9C1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	YE/VT	5542	Auxiliary Heater Pump Relay Coil Control	I	—

X50E Fuse Block - Battery Auxiliary X2 (5WC/9C1)





Connector Part Information

Harness Type: Body

OEM Connector: 12103517

Service Connector: Service by Cable Assembly - See Part Catalog

Description: 1-Way Ring Terminal

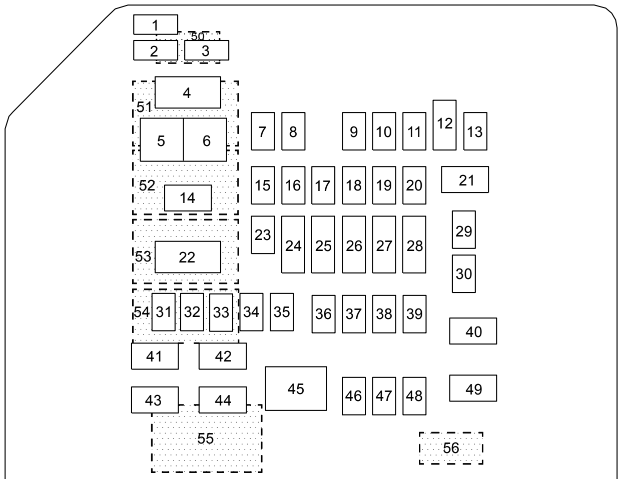
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X50E Fuse Block - Battery Auxiliary X2 (5WC/9C1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	YE/VT	5542	Auxiliary Heater Pump Relay Coil Control	I	—

X51L Fuse Block - Instrument Panel Left Label

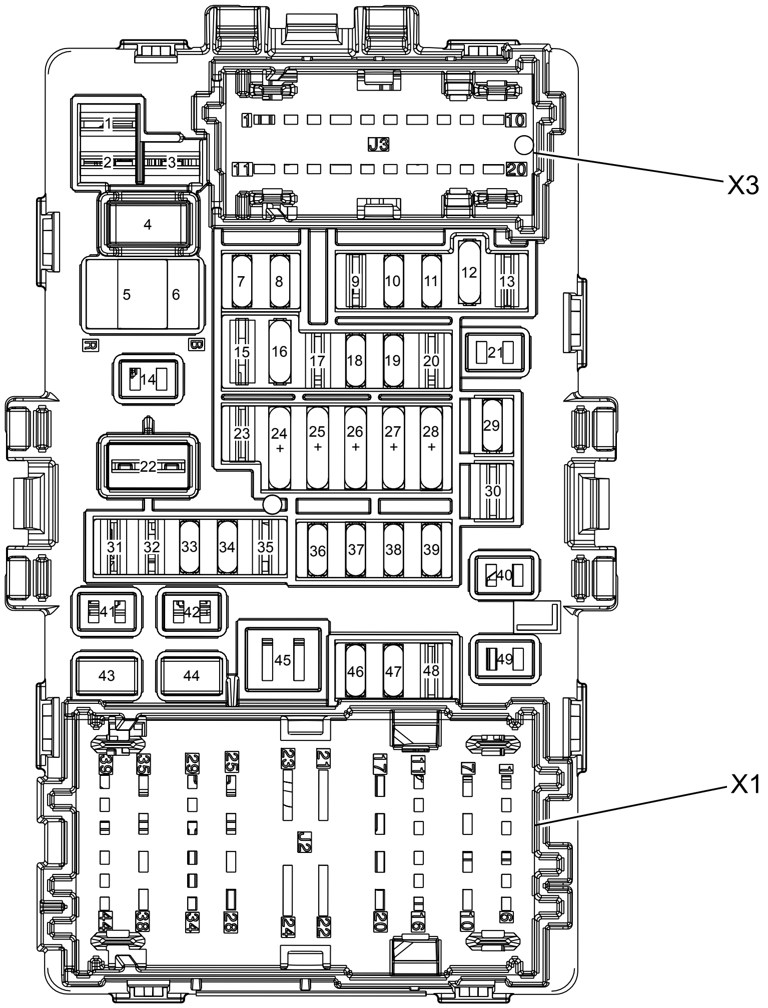

1
50
2
3
4
51
5
6
7
8
9
10
11
12
13
52
14
15
16
17
18
19
20
21
53
22
23
24
25
26
27
28
29
30
54
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
55
56

1 EMPTY
2 EMPTY
3 EMPTY
4 APO 1 (15A)
5 APO / RAP (50A)
6 APO / BATT (50A)
7 UGDO ISRVM (10A)
8 SEO RAP (10A)
9 EMPTY
10 BCM 3 (20A)
11 BCM 5 (10A)
12 SWC BKLT (2A)
13 EMPTY
14 EMPTY
15 EMPTY
16 DLIS (2A)
17 EMPTY
18 MIR WNDO MDL (5A)

19 BCM 1 (10A)
20 EMPTY
21 EMPTY
22 EMPTY
23 EMPTY
24 HVAC / AUX HVAC IGN (15A/15A)
25 IPC IGN / SDM IGN (10A/10A)
26 TILT COL / SEO
TILT COL LCK1 / SEO (15A/15A)
27 DLC / DSM (10A/10A) (15A)
28 PEPS / HVAC BATT (10A/10A)
29 THEFT DTRNT (10A)
30 EMPTY
31 EMPTY
32 EMPTY
33 SEO ALC (15A)
34 PRK ENBL / EAP (15A)
35 EMPTY
36 MISC RUN CRNK (10A)

37 HTD STR WHL (7.5A)
38 TILT COL LCK2 (10A)
39 IPC (10A)
40 EMPTY
41 EMPTY
42 EMPTY
43 LT DR (30A)
44 DRVR PWR SEAT (30A)
45 EMPTY
46 RT HTD CLD SEAT (15A)
47 LT HTD CLD SEAT (15A)
48 EMPTY
49 EMPTY
50 APO 2 (15A)
51 EMPTY
52 RAP / ACCY (RLY)
53 RUN CRNK (RLY)
54 EMPTY
55 EMPTY
56 EMPTY

X51L Fuse Block - Instrument Panel Left Top View


X3
X1
J3
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

X50L Fuse Block - Instrument Panel Left Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	EMPTY	F1DL	—	•
2	EMPTY	F2DL	—	•
3	EMPTY	F3DL	—	•
4	APO 1 (15A)	F4DL	15A	• •
5	APO/RAP (50A)	F5DL	50A	• •
6	APO/BATT (50A)	F6DL	50A	• •

7	UGDO ISRVM (10A)	F7DL	10A	• •
8	SEO RAP (10A)	F8DL	10A	• • • •
9	EMPTY	F9DL	—	•
10	BCM 3 (20A)	F10DL	20A	• • • • • • • • • •
11	BCM 5 (10A)	F11DL	10A	• •

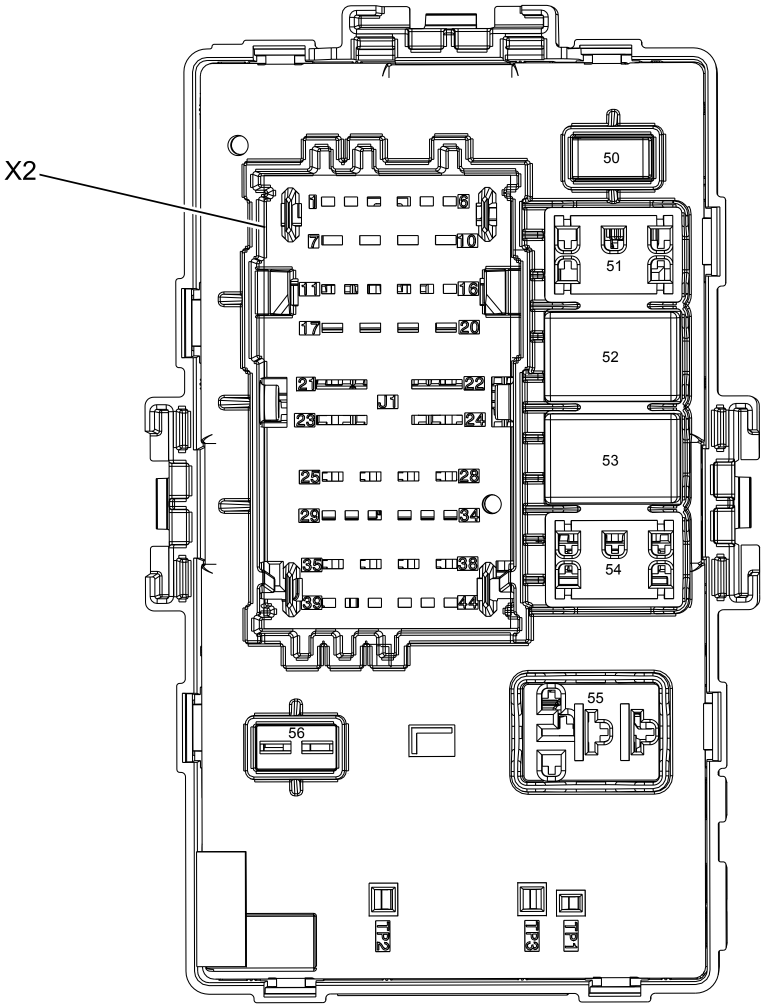
				• •
12	SWC BKLT (2A)	F12DL	2A	•
13	EMPTY	F13DL	—	•
14	EMPTY	F14DL	—	•
15	EMPTY	F15DL	—	•

				•
16	DLIS (2A)	F16DL	2A	•
17	VPM (10A)	F17DL	10A	•
18	MIR WNDO MDL (10A)	F18DL	10A	• •
19	BCM 1 (10A)	F19DL	10A	• •
20	FRT BLSTR (15A)	F20DL	15A	• • • •
21	EMPTY	F21DL	—	•
22	EMPTY	F22DL	—	•
23	EMPTY	F23DL	—	•
24	HVAC/AUX HVAC IGN (15A/15A)	F24DL	15A	• •

				•
25	IPC IGN/SDM IGN (10A/10A)	F25DL	10A	• • •
26	TILT COL/SEO TILT COL LCK1/SEO (15A/15A)	F26DL	15A	• • • •
27	DLC/DSM (10A/10A)	F27DL	10A	• • •
28	PEPS/HVAC BATT (10A/10A)	F28DL	10A	• •
29	THEFT DTRNT (10A)	F29DL	10A	• •
30	EMPTY	F30DL	—	•
31	EMPTY	F31DL	—	•
32	EMPTY	F32DL	—	•
33	SEO ALC (15A)	F33DL	15A	•
34	PRK ENBL/EAP (15A)	F34DL	10A	• • • •
35	EMPTY	F35DL	—	•
36	MISC RUN CRNK (10A)	F36DL	10A	• • • •
37	HTD STR WHL (7.5A)	F37DL	7.5A	•
38	TILT COL LCK2 (10A)	F38DL	10A	•
39	IPC (10A)	F39DL	10A	• • • •

				• •
40	EMPTY	F40DL	—	•
41	EMPTY	F41DL	—	•
42	EURO TRLR	F42DL	30A	•
43	LT DR (30A)	F43DL	30A	• •
44	DRVR PWR SEAT (30A)	F44DL	30A	• •
45	EMPTY	F45DL	—	•
46	RT HTD CLD SEAT (15A)	F46DL	15A	• •
47	LT HTD CLD SEAT (15A)	F47DL	15A	• •
48	EMPTY	F48DL	—	•
49	EMPTY	F49DL	—	•

X51L Fuse Block - Instrument Panel Left Bottom View

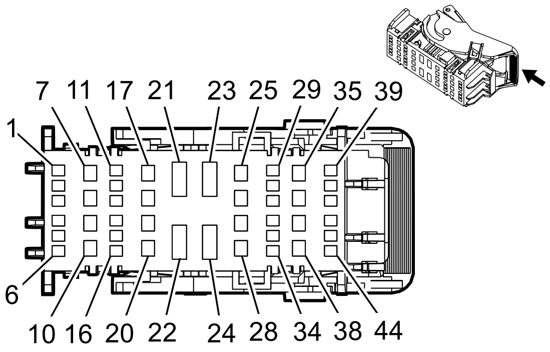

X2
50
1
6
7
10
11
16
17
20
21
22
J1
23
24
25
28
29
34
35
38
39
44
51
52
53
54
55
56
TP2
TP3
TP1

X50L Fuse Block - Instrument Panel Left Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
50	APO 2 (15A)	F50DL	15A	-
56	EMPTY	F56DL	—	-
Relays				
51	EMPTY	—	—	- Not Used
52	RAP/ACCY (RLY)	KR76A Retained Accessory Power Relay 1	—	- -
53	RUN CRNK (RLY)	KR73 Ignition Main Relay	-	- - - -

				• • •
54	EMPTY	—	—	• Not Used
55	EMPTY	—	—	• Not Used
—	—	KR87 Transmission Park Position Relay	—	• KR1F Adjustable Pedal Relay - Forward (JF4 without A45) • KR1R Adjustable Pedal Relay - Rearward (JF4 without A45) • S143L Folding Seat Control Switch — 2nd Row Left (ATN or ATT) • S143R Folding Seat Control Switch — 2nd Row Right (ATN or ATT) • S144A Folding Seat Control Switch — Rear Compartment 2nd Row (ATN or ATT) • S144B Folding Seat Control Switch — Rear Compartment 3rd Row (ATN or ATT)
—	—	KR1F Adjustable Pedal Relay - Forward	—	• M5 Adjustable Pedal Motor (JF4 without A45)
—	—	KR1R Adjustable Pedal Relay - Rearward	—	• M5 Adjustable Pedal Motor (JF4 without A45)

X51L Fuse Block - Instrument Panel Left X1



Connector Part Information

Harness Type: Body

OEM Connector: 13967687

Service Connector: 19329455

Description: 44-Way F 1.5, 2.8, 800 Metri-Pack Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	13575838	J-35616-35 (VT)	J-38125-11A	7116-4111-02	Yazaki 9	E	A
III	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

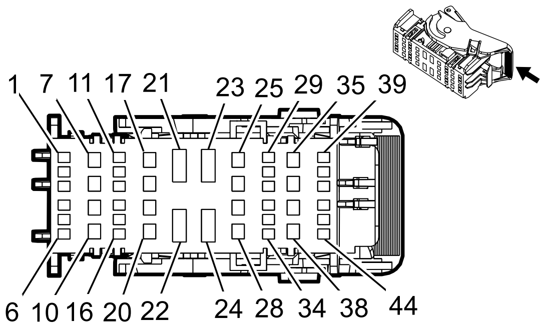
X51L Fuse Block - Instrument Panel Left X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/BN	2240	Battery Positive Voltage	VI	—
2	0.5	RD/D-BU	4540	Battery Positive Voltage	VI	—
3	0.5	RD/VT	1640	Battery Positive Voltage	III	—
4	—	—	—	Not Occupied	—	—
5	0.5	RD/BN	1140	Battery Positive Voltage	VI	—
6 - 13	—	—	—	Not Occupied	—	—

14	0.5	RD/YE	4340	Battery Positive Voltage	VI	—
15	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	VI	—
16	0.5	RD/VT	1940	Battery Positive Voltage	VI	—
17	0.75	RD/GN	6140	Battery Positive Voltage	IV	—
18	0.75	RD/GN	5140	Battery Positive Voltage	V	—
	0.75	RD/GN	5140	Battery Positive Voltage	IV	—
	0.75	RD/GN	5140	Battery Positive Voltage	II	—
19	—	—	—	Not Occupied	—	—
20	0.75	GN/VT	5130	Adjustable Pedal Actuator Forward Control	IV	—
21	5	RD/VT	842	Battery Positive Voltage	I	—
22	—	—	—	Not Occupied	—	—
23	5	RD/D-BU	42	Battery Positive Voltage	I	—
24 - 26	—	—	—	Not Occupied	—	—
27	2.5	RD/YE	5040	Battery Positive Voltage	IV	—
28	0.75	YE	5129	Adjustable Pedal Actuator Rearward Control	IV	—
29	—	—	—	Not Occupied	—	—
30	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	VI	—
31	—	—	—	Not Occupied	—	—
32	0.5	VT/GN	1739	Run/Crank Ignition 1 Voltage	VI	—

33	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	VI	—
34	0.5	YE/BK	5813	Park Enable Control	VI	—
35	—	—	—	Not Occupied	—	—
36	2.5	RD/D-BU	1842	Battery Positive Voltage	V	—
37	2.5	RD/D-BU	1842	Battery Positive Voltage	V	—
38 - 41	—	—	—	Not Occupied	—	—
42	0.35	GN/VT	5199	Run/Crank Relay Coil Control	VI	—
43	0.35 0.35	GY/GN GY/VT	4083 755	RAP Relay 2 Coil Control RAP Relay Coil Control	VI VI	— —
44	0.35	VT/YE	43	Accessory Ignition Voltage	VI	—

X51L Fuse Block - Instrument Panel Left X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13967688

Service Connector: 19329456

Description: 44-Way F 1.5, 2.8, 800 Metri-Pack Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13580025	J-35616-35 (VT)	J-38125-11A	7116-4111-02	Yazaki 9	E	A
II	13580025	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

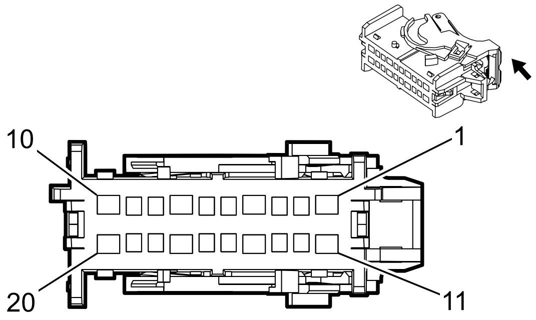
X51L Fuse Block - Instrument Panel Left X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	YE	6817	LED Backlight Dimming Control	V	—
4	0.35	BN	6136	Control	V	—
5	0.5	RD/D-BU	540	Battery Positive Voltage	V	—
6	—	—	—	Not Occupied	—	—
7	0.5	RD/BN	2940	Battery Positive Voltage	III	—
8	1	RD/GY	2140	Battery Positive Voltage	III	—

9	—	—	—	Not Occupied	—	—
10	1.5	RD/BN	4240	Battery Positive Voltage	IV	—
11 - 13	—	—	—	Not Occupied	—	—
14	0.5	RD/GY	4140	Battery Positive Voltage	V	—
	0.75	RD/GY	4140	Battery Positive Voltage	V	—
15	0.5	VT/GY	539	Run/Crank Ignition 1 Voltage	V	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.5	RD/WH	2740	Battery Positive Voltage	III	—
19	—	—	—	Not Occupied	—	—
20	1.5	RD/WH	1040	Battery Positive Voltage	IV	—
21 - 24	—	—	—	Not Occupied	—	—
25	0.35	RD/VT	3340	Battery Positive Voltage	III	—
	0.35	RD/VT	3340	Battery Positive Voltage	II	—
	0.5	RD/VT	3340	Battery Positive Voltage	I	—
	0.5	RD/VT	3340	Battery Positive Voltage	III	—
26	0.5	RD/WH	640	Battery Positive Voltage	III	—
27	0.5	RD/VT	4640	Battery Positive Voltage	III	—
	1.5	RD/VT	4640	Battery Positive Voltage	IV	—
28	0.5	VT/BK	1639	Run/Crank Ignition 1 Voltage	III	—
29 - 33	—	—	—	Not Occupied	—	—

29 - 33	—	—	—	Not Occupied	—	—
34	0.5	VT/BK	739	Run/Crank Ignition 1 Voltage	V	—
35	0.5	RD/GY	2840	Battery Positive Voltage	III	—
36	0.75	D-BU/VT	807	OFF /Accessory Ignition Voltage	III	—
37	0.5	VT/WH	1139	Run/Crank Ignition 1 Voltage	III	—
38	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	III	—
39 - 42	—	—	—	Not Occupied	—	—
43	0.35	YE	6812	Out of Park Signal	V	—
44	0.75	BK	1850	Ground	V	—

X51L Fuse Block - Instrument Panel Left X3



Connector Part Information

Harness Type: Headliner

OEM Connector: 15547106

Service Connector: 13597270

Description: 20-Way F 1.5, 2.8 OCS Series (BK)

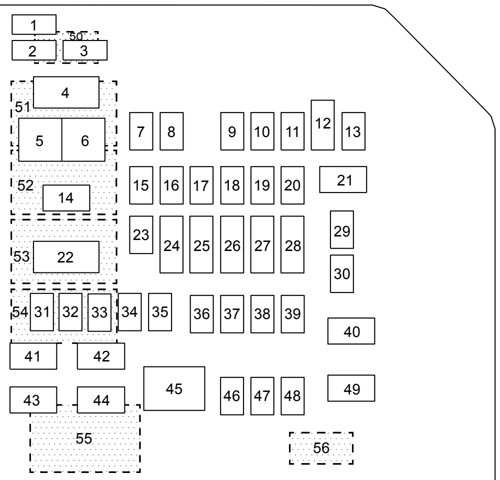
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X51L Fuse Block - Instrument Panel Left X3

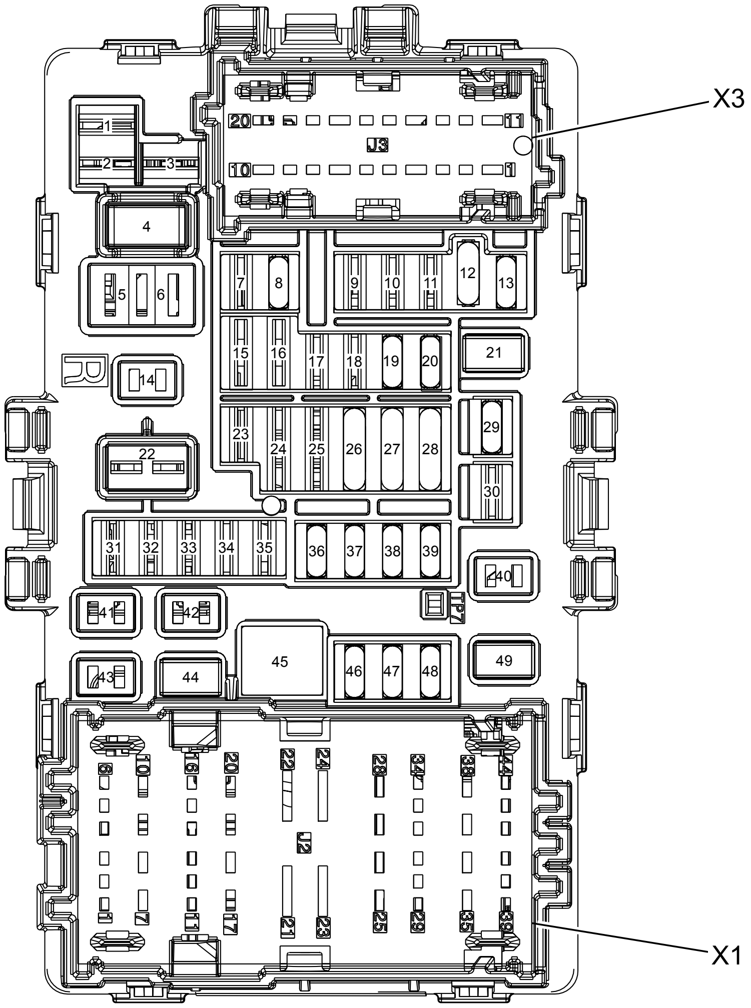
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 10	—	—	—	Not Occupied	—	—
11	0.75	VT/YE	43	Accessory Ignition Voltage	I	—
12	0.75	RD/YE	240	Battery Positive Voltage	II	—
13	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	II	—
14	0.35	VT/BK	1139	Run/Crank Ignition 1 Voltage	I	—
15 - 20	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right Label


1
2
50
3
4
51
5
6
7
8
9
10
11
12
13
52
14
15
16
17
18
19
20
21
23
24
25
26
27
28
29
53
22
30
54
31
32
33
34
35
36
37
38
39
40
41
42
45
43
44
46
47
48
49
55
56

1	EMPTY
2	EMPTY
3	EMPTY
4	AP0 4 (15A)
5	EMPTY
6	EMPTY
7	EMPTY
8	GLBX (10A)
9	EMPTY
10	EMPTY
11	EMPTY
12	SWC (2A)
13	BCM 8 (20A)
14	EMPTY
15	EMPTY
16	EMPTY
17	EMPTY
18	EMPTY
19	BCM 4 (20A)
20	RSE (10A)
21	S/ROOF (30A)
22	EMPTY
23	EMPTY
24	EMPTY
25	EMPTY
26	INFO/AIRBAG (10A/10A)
27	SPARE/RAIN SNSR (10A/10A)
28	USB/OBS DET (15A)
29	RDO (20A)
30	EMPTY
31	EMPTY
32	EMPTY
33	EMPTY
34	EMPTY
35	EMPTY
36	SEO B2 (30A)
37	SEO (15A)
38	BCM 2 (10A)
39	AC INV (25A)
40	EMPTY
41	EMPTY
42	EMPTY
43	EMPTY
44	RT DR WNDW MTR (30A)
45	FRT BLWR (40A)
46	BCM 6 (15A)
47	BCM 7 (15A)
48	AMP (30A)
49	RT FRT SEAT (30A)
50	APO 3 (15A)
51	EMPTY
52	RAP / ACCY (RLY)
53	EMPTY
54	EMPTY
55	EMPTY
56	EMPTY

X51R Fuse Block - Instrument Panel Right Top View


X3
J3
20
11
10
1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
J2
X1

X50R Fuse Block - Instrument Panel Right Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
1	EMPTY	F1DR	—	•
2	EMPTY	F2DR	—	•
3	EMPTY	F3DR	—	•
4	APO 4 (15A)	F4DR	15A	• •
5	EMPTY	F5DR	—	•
6	EMPTY	F6DR	—	•
7	EMPTY	F7DR	—	•

8	GLBX (10A)	F8DR	—	• •
9	EMPTY	F9DR	—	•
10	EMPTY	F10DR	—	•
11	EMPTY	F11DR	—	•
12	SWC (2A)	F12DR	2A	• •
13	BCM 8 (20A)	F13DR	20A	• • • • • • •
14	EMPTY	F14DR	—	•
15	EMPTY	F15DR	—	•
16	EMPTY	F16DR	—	•
17	EMPTY	F17DR	—	•
18	EMPTY	F18DR	—	•
19	BCM 4 (20A)	F19DR	-	• • • • • • • • •
20	RSE (10A)	F20DR	10A	• • • • •
21	S/ROOF (30A)	F21DR	30A	•

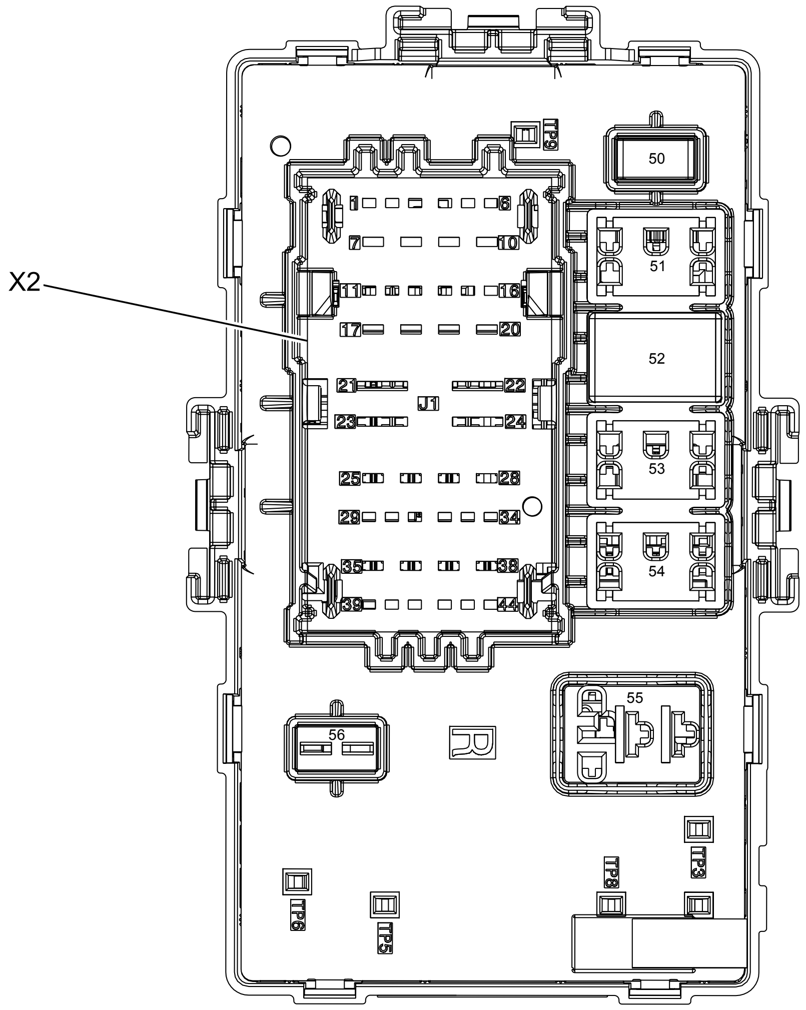
				•
22	EMPTY	F22DR	—	•
23	EMPTY	F23DR	—	•
24	EMPTY	F24DR	—	•
25	EMPTY	F25DR	—	•
26	INFO/AIRBAG (10A/10A)	F26DR	10A	• • •
27	SPARE/RAIN SNSR (10A/10A)	F27DR	10A	• •
28	USB / OBS DET (10A)	F28DR	10A	• • • • • •
29	RDO (20A)	F29DR	20A	• • • • •
30	EMPTY	F30DR	—	•
31	EMPTY	F31DR	—	•
32	EMPTY	F32DR	—	•
33	EMPTY	F33DR	—	•
34	EMPTY	F34DR	—	•
35	EMPTY	F35DR	—	•
36	SEO B2 (30A)	F36DR	30A	• • •
37	SEO (15A)	F37DR	15A	•
38	BCM 2 (10A)	F38DR	10A	•

				• • • • •
39	AC INV (25A)	F39DR	25A	•
40	EMPTY	F40DR	—	•
41	EMPTY	F41DR	—	•
42	EMPTY	F42DR	—	•
43	EMPTY	F43DR	—	•
44	RT DR WNDW MTR (30A)	F44DR	30A	• •
45	FRT BLWR (40A)	F45DR	40A	•
46	BCM 6 (15A)	F46DR	15A	• •

				• • • • • • • • • • • • • • • • • • •
47	BCM 7 (15A)	F47DR	15A	• • • • • • • • • • • • • • • • • • • •
48	AMP (30A)	F48DR	30A	•
49	RT FRT SEAT (30A)	F49DR	30A	•

49	RT FRT SEAT (30A)	F49DR	30A	• •

X51R Fuse Block - Instrument Panel Right Bottom View

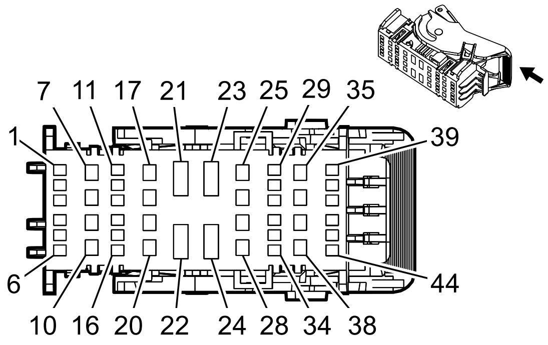

X2
50
TP9
1
6
7
10
11
16
17
20
21
22
J1
23
24
25
28
29
34
35
38
39
44
51
52
53
54
55
56
R
TP3
TP8
TP6
TP5

X50R Fuse Block - Instrument Panel Right Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
50	APO 3 (15A)	F50DR	15A	• •
56	EMPTY	F56DR	—	•
Relays				
51	EMPTY	—	—	• Not Used
52	RAP / ACCY (RLY)	KR76B Retained Accessory Power Relay 2	—	• •
53	EMPTY	—	—	• Not Used
54	EMPTY	—	—	• Not Used

55	EMPTY	—	—	• Not Used
—	KR113 Child Security Lock Disable Relay	—	—	• A23LR Door Latch Assembly - Left Rear • A23P Door Latch Assembly - Passenger • A24RR Door Latch Assembly - Right Rear
—	KR114 Door Dead Lock Relay (N08 or UTT)	—	—	• A24D Door Latch Assembly - Driver • A23LR Door Latch Assembly - Left Rear • A23P Door Latch Assembly - Passenger • A24RR Door Latch Assembly - Right Rear • M27 Fuel Fill Door Unlatch Actuator (N08)
—	KR147 Instrument Panel Compartment Door Unlatch Actuator Relay (Z75)	—	—	• M91 Instrument Panel Compartment Door Unlatch Actuator (Z75)

X51R Fuse Block - Instrument Panel Right X1



Connector Part Information

Harness Type: Body

OEM Connector: 13967689

Service Connector: 19329457

Description: 44-Way F 1.5, 2.8, 800 Metri-Pack Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	13575718	J-35616-44 (YE)	J-38125-558	Not Available	Not Available	Not Available	Not Available
III	13575839	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
IV	19301751	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VI	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

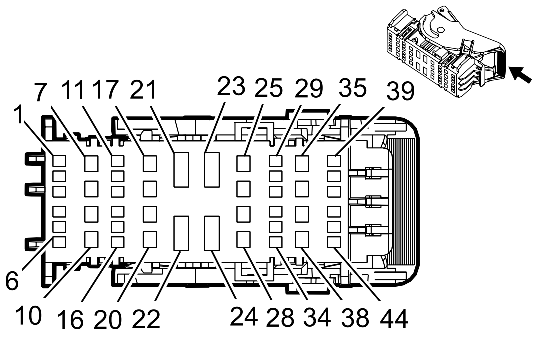
X51R Fuse Block - Instrument Panel Right X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY	295	Door Lock Actuator Lock Control	IV	—
2	1.5	WH/D-BU	3266	Child Security Lock Motor Lock Control	IV	—
3	0.35	VT/YE	3267	Child Security Lock Relay Control	VII	—
4	1.5	GY/GN	3271	Door Lock Control 2	IV	—
5	—	—	—	Not Occupied	—	—

6	0.35	GY/GN	4083	RAP Relay 2 Coil Control	VII	—
	0.35	GY/VT	755	RAP Relay Coil Control	VII	—
7 - 14	—	—	—	Not Occupied	—	—
15	0.35	RD/D-BU	840	Battery Positive Voltage	VII	—
16	0.35	RD/GN	4440	Battery Positive Voltage	VII	—
	0.5	RD/GN	4440	Battery Positive Voltage	VII	—
17	—	—	—	Not Occupied	—	—
18	1.5	VT/YE	143	Accessory Ignition Voltage	VI	—
19	2.5	RD/WH	1340	Battery Positive Voltage	VI	—
	2.5	RD/WH	1340	Battery Positive Voltage	III	—
20	2.5	RD/WH	1340	Battery Positive Voltage	III	—
	2.5	RD/WH	1340	Battery Positive Voltage	VI	—
21	6	RD/GN	242	Battery Positive Voltage	II	—
22	4	RD/VT	542	Battery Positive Voltage	I	—
23	—	—	—	Not Occupied	—	—
24	6	RD/GY	142	Battery Positive Voltage	II	—
25 - 26	—	—	—	Not Occupied	—	—
27	0.75	RD/VT	340	Battery Positive Voltage	V	—
28	—	—	—	Not Occupied	—	—
29	1.5	D-BU/WH	195	Door Lock Control	IV	—

[illegible]	1.5	D-BU/WH	[illegible]	Door Lock Control	IV	—
30	1.5	BN	5910	Door Double Lock Actuator Lock Control	IV	—
31	—	—	—	Not Occupied	—	—
32	0.5	GN/BN	6132	Local Interconnect Network Serial Data Bus 1	VII	—
33	0.75	RD/WH	3440	Battery Positive Voltage	VII	—
34	0.75	RD/GN	5140	Battery Positive Voltage	VII	—
35 - 36	—	—	—	Not Occupied	—	—
37	2.5	RD/YE	3740	Battery Positive Voltage	VI	—
38	2.5	RD/BN	1440	Battery Positive Voltage	VI	—
	2.5	RD/BN	1440	Battery Positive Voltage	V	—
39	—	—	—	Not Occupied	—	—
40	0.75	GY	295	Door Lock Actuator Lock Control	IV	—
	0.75	GY	5911	Door Lock Actuator Lock Control 2	VII	—
	0.75	GY	5911	Door Lock Actuator Lock Control 2	IV	—
41	0.35	D-BU/BN	7547	Security Lock Relay Control	VII	—
42	0.35	RD/D-BU	840	Battery Positive Voltage	VII	—
	0.5	RD/D-BU	840	Battery Positive Voltage	VII	—
43	0.75	RD/GN	3140	Battery Positive Voltage	VII	—
44	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13967690

Service Connector: 19329458

Description: 44-Way F 1.5, 2.8, 800 Metri-Pack Series (GN)

Terminal Part Information

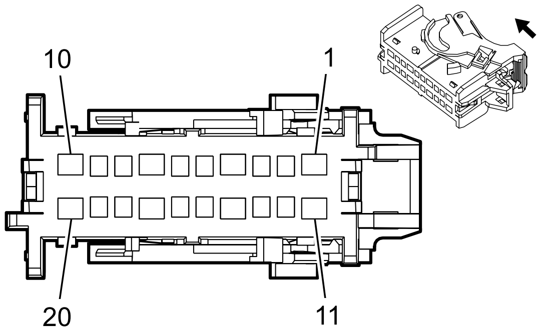
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575718	J-35616-44 (YE)	J-38125-558	12110127	Delphi 19	F	G
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X51R Fuse Block - Instrument Panel Right X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GN	1540	Battery Positive Voltage	IV	—
2	0.35	BN/WH	4046	Glove Box Door Release Relay Control	IV	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.75	RD/VT	4040	Battery Positive Voltage	II	—
8	0.75	RD/D-BU	2540	Battery Positive Voltage	II	—
9	—	—	—	Not Occupied	—	—
10	1.5	VT/YE	243	Accessory Ignition Voltage	III	—
11 - 15	—	—	—	Not Occupied	—	—

11 - 15	—	—	—	Not Occupied	—	—
16	0.35	RD/YE	3040	Battery Positive Voltage	IV	—
17	1	RD/VT	340	Battery Positive Voltage	II	—
18	—	—	—	Not Occupied	—	—
19	0.5	BN/GY	4048	Glove Box Door Release Control	II	—
20 - 21	—	—	—	Not Occupied	—	—
22	2.5	BK	1050	Ground	I	—
23 - 28	—	—	—	Not Occupied	—	—
29	0.5	RD/BN	2240	Battery Positive Voltage	IV	—
30 - 33	—	—	—	Not Occupied	—	—
34	0.35	RD/D-BU	3240	Battery Positive Voltage	IV	—
35	2.5	RD/GY	4140	Battery Positive Voltage	III	—
36 - 37	—	—	—	Not Occupied	—	—
38	1.5	RD/YE	2340	Battery Positive Voltage	III	—
39 - 44	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X3



Connector Part Information

Harness Type: Headliner

OEM Connector: 15547107

Service Connector: 13597269

Description: 20-Way F 1.5, 2.8 OCS Series (GY)

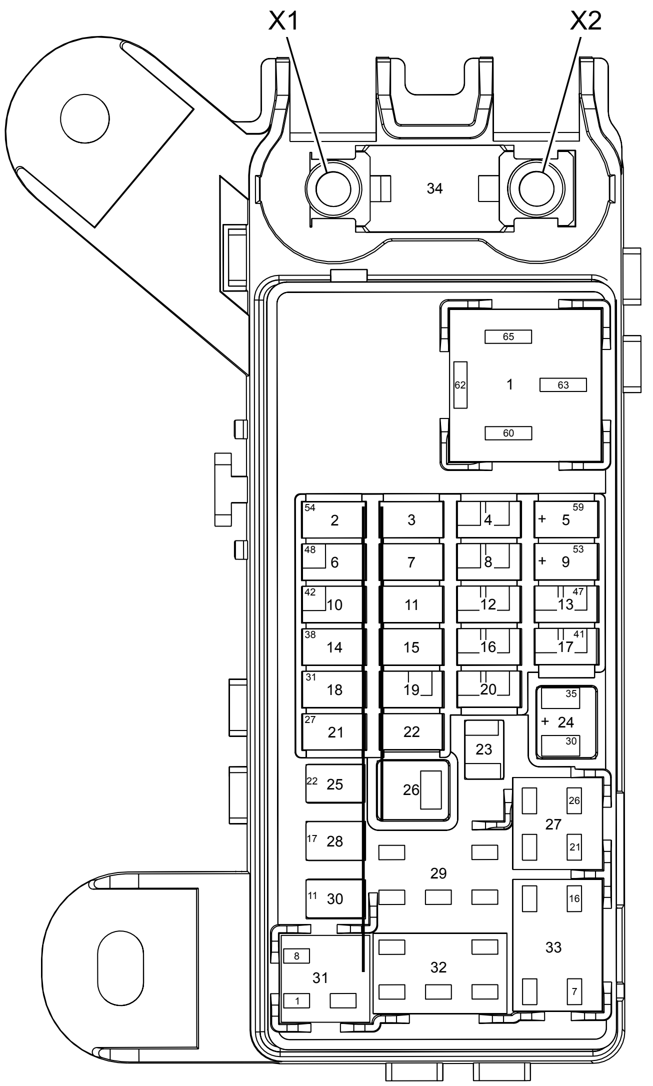
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13580025	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X51R Fuse Block - Instrument Panel Right X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/GN	3140	Battery Positive Voltage	I	—
2	0.5	GN/BN	6132	Local Interconnect Network Serial Data Bus 1	III	—
3 - 7	—	—	—	Not Occupied	—	—
8	0.35	RD/D-BU	840	Battery Positive Voltage	III	—
9	—	—	—	Not Occupied	—	—
10	0.35	BK	1050	Ground	II	CE1
	2.5	BK	1050	Ground	II	KI5
11 - 20	—	—	—	Not Occupied	—	—

X53A Fuse Block - Rear Body Top View


X1
X2
34
65
62
1
63
60
54
2
3
4
59
5
48
6
7
8
53
9
42
10
11
12
47
13
38
14
15
16
41
17
31
18
19
20
35
24
30
27
21
22
23
22
25
26
26
27
21
17
28
29
11
30
16
33
8
31
1
32
7

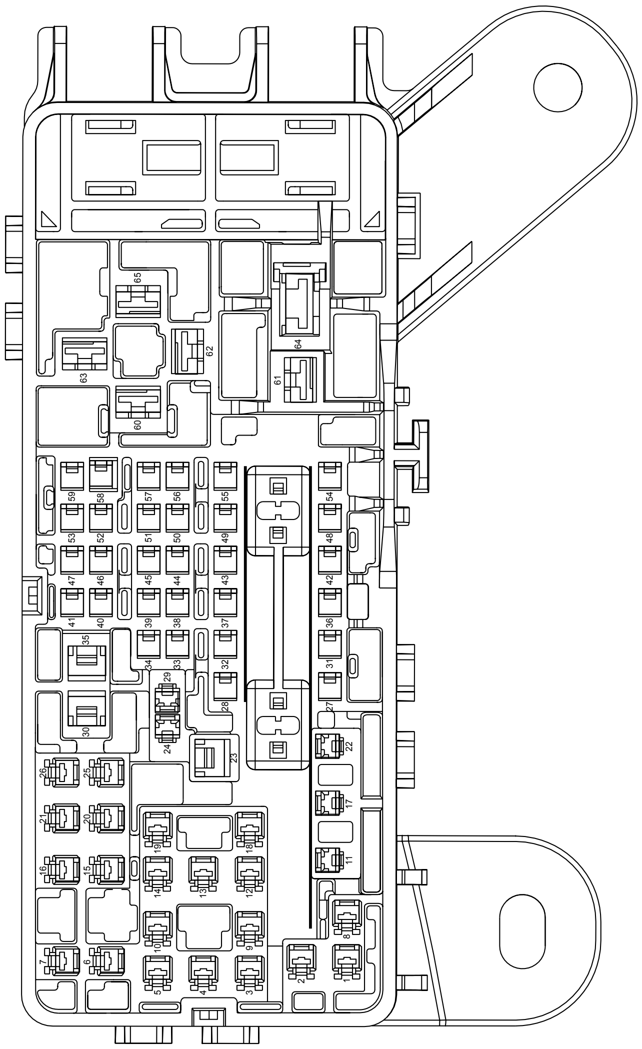
X53A Fuse Block - Rear Body Usage

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
2	-	F2RA	15A	•
3	-	F3RA	15A	•
4	-	F4RA	15A	• •
5	-	F5RA	15A	•
6	-	F6RA	-	•
7	-	F7RA	10A	•
8	-	F8RA	-	•

9	-	F9RA	10A	•
10	-	F10RA	-	•
11	-	F11RA	10A	•
12	-	F12RA	-	•
13	-	F13RA	-	•
14	-	F14RA	10A	•
15	-	F15RA	20A	•
16	-	F16RA	-	•
17	-	F17RA	-	•
18	-	F18RA	30A	•
19	-	F19RA	-	•
20	-	F20RA	-	•
21	-	F21RA	20A	• •
22	-	F22RA	10A	•
23	-	F23RA	-	•
24	-	F24RA	30A	• •
25	-	F25RA	30A	•
26	-	F26RA	-	•
28	-	F28RA	30A	•
30	-	F30RA	20A	• •
1	—	KR5 Rear Defogger Relay	—	• • •
27	—	KR95A Liftgate Unlatch Relay	—	•
29	—	—	—	• Not Used

				• Not Used
31	—	KR4B Outside Rearview Mirror Heater Relay	—	• • •
32	—	KR57 Rear Fog Lamp Relay	—	• •
33	—	KR162 Liftgate Window Unlatch Relay	—	•

X53A Fuse Block - Rear Body (Wire Entry)


65
63
62
64
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
29
28
27
30
24
23
22
26
25
21
20
17
19
18
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

Connector Part Information

Harness Type: Body

OEM Connector: 13940427

Service Connector: Not Available

Description: Wire Entry Fuse Block (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
II	13575719	J-35616-4A (PU)	J-38125-553	12110844	4	C	A
III	13579978	J-35616-43 (RD)	J-38125-553	15410292	23	G/F	G
IV	13579923	J-35616-4A (PU)	J-38125-553	12110842	4	A	B
V	13579978	J-35616-43 (RD)	J-38125-553	15410292	23	G/F	G/F

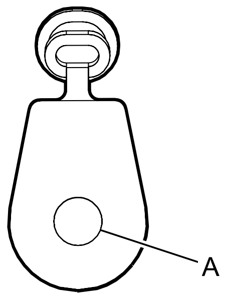
VI	13575719	J-35616-4A (PU)	J-38125-553	12110844	4	E	A
VII	13579958	J-35616-4A (PU)	J-38125-11A	15324340	19	F	G
VIII	13575288	J-35616-42 (RD)	J-38125-11A	7116-4120-02	9	E	A
IX	Pending	J-35616-42 (RD)	J-38125-11A	7116-4122-02	10	D	G
X	Pending	J-35616-44 (YE)	J-38125-558	12110127	19	Not Available	Not Available

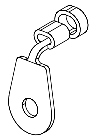
X53A Fuse Block - Rear Body (Wire Entry)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/VT	340	Battery Positive Voltage	I	DL3, DL8 or DR4
2	0.5	BN/VT	193	Rear Defog Relay Control	I	DL3, DL8 or DR4
3	0.35	RD/VT	340	Battery Positive Voltage	I	T79
4	-	-	-	Not Occupied	-	-
5	0.35	GY/YE	317	Fog Lamp Relay Coil Control	I	T79
6	0.35	GY/YE	6188	Lift Glass/Trunk Motor Release Control	I	-
7	0.5	RD/YE	4340	Battery Positive Voltage	I	-
8	0.5	BK	1150	Ground	I	DL3, DL8 or DR4
9	0.5	BK	1150	Ground	I	T79
10	0.5	YE/GY	122	Rear Fog Lamp Control	I	T79
11	1.5 1.5	RD/D-BU RD/D-BU	6040 6040	Battery Positive Voltage	I	-
12-14	-	-	-	Not Occupied	-	-
15	0.5	D-BU/YE	6795	Lift Glass/Trunk Motor Release Control 2	I	-
16	0.5	BK	1150	Ground	I	-
17	2.5	RD/D-BU	1240	Battery Positive Voltage	I	AS8
18-19	-	-	-	Not Occupied	-	-
20	0.5	GN/BN	5706	Endgate Latch Relay Control	I	TB4
21	0.5	RD/BN	4240	Battery Positive Voltage	I	TB4
22	3	RD/GY	7040	Battery Positive Voltage	I	TB5
23-24	-	-	-	Not Occupied	-	-
25	0.5	BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	I	TB4
26	0.35	YE	5704	Endgate Latch Relay Coil Control	I	TB4
27	0.75	RD/D-BU	1240	Battery Positive Voltage	II	ATN or ATT
28	0.5	RD/VT	340	Battery Positive Voltage	I	T79

29	-	-	-	Not Occupied	-	-
30	4	BN/VT	938		III	-
31	2.5	RD/GY	1740	Battery Positive Voltage	IV	-
32-34	-	-	-	Not Occupied	-	-
35	2.5	BN/VT	293	Rear Defog Element Supply Voltage	V	-
36	0.5	RD/D-BU	840	Battery Positive Voltage	VI	TB5
37	0.75	RD/YE	3040	Battery Positive Voltage	II	-
38-42	-	-	-	Not Occupied	-	-
43	0.5	RD/YE	4340	Battery Positive Voltage	VI	-
44-48	-	-	-	Not Occupied	-	-
49	0.5	RD/BN	4240	Battery Positive Voltage	I	TB4
50-51	-	-	-	Not Occupied	-	-
52	2.5	BN/VT	293	Rear Defog Element Supply Voltage	IV	UTT or UTV
53	0.5	BN/VT	293	Rear Defog Element Supply Voltage	I	UTV
54	0.75	RD/L-GN	5140	Battery Positive Voltage	II	KA6
55	0.75	RD/L-GN	6140	Battery Positive Voltage	II	KA6
56	0.5	RD/VT	340	Battery Positive Voltage	I	DL3, DL8 or DR4
57	2.5	BN/YE	2267	Mirror Heating Element Supply Voltage	VI	DL3, DL8 or DR4
58	4	BN/VT	938		VII	-
59	-	-	-	Not Occupied	-	-
60	0.5 0.5	BK BK	1150 1150	Ground	VIII	-
61	4	RD/D-BU	42	Battery Positive Voltage	IX	-
62	4	BN/VT	938		IX	-
63	4	RD/D-BU	42	Battery Positive Voltage	IX	-
64	6	RD/WH	942		X	-
65	0.5 0.5	BN/VT BN/VT	193 193	Rear Defog Relay Control	VIII	- DL3, DL8 or DR4

X53A Fuse Block - Rear Body X1 (5W4/9C1)





Connector Part Information

Harness Type: Body

OEM Connector: 12146714

Service Connector: Service by Cable Assembly - See Part Catalog

Description: 1-Way Ring Terminal

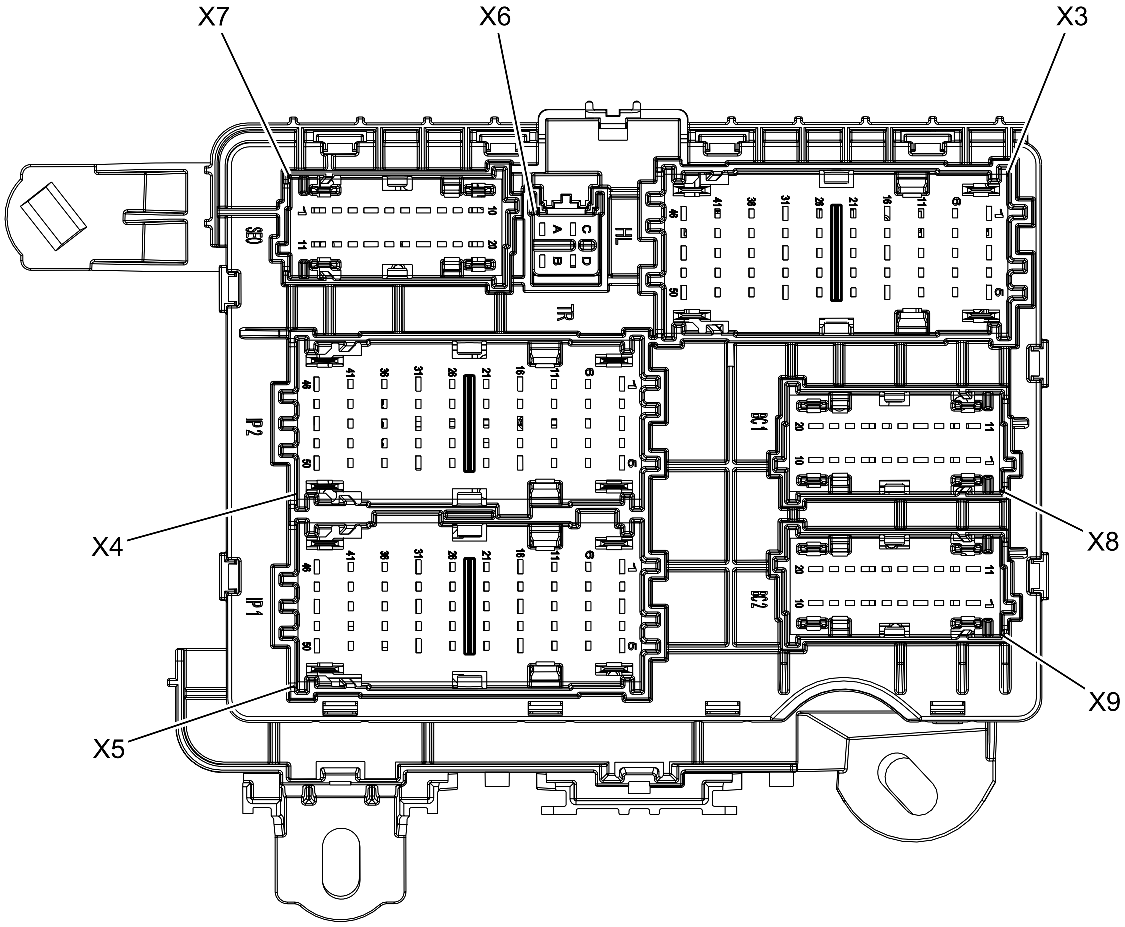
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

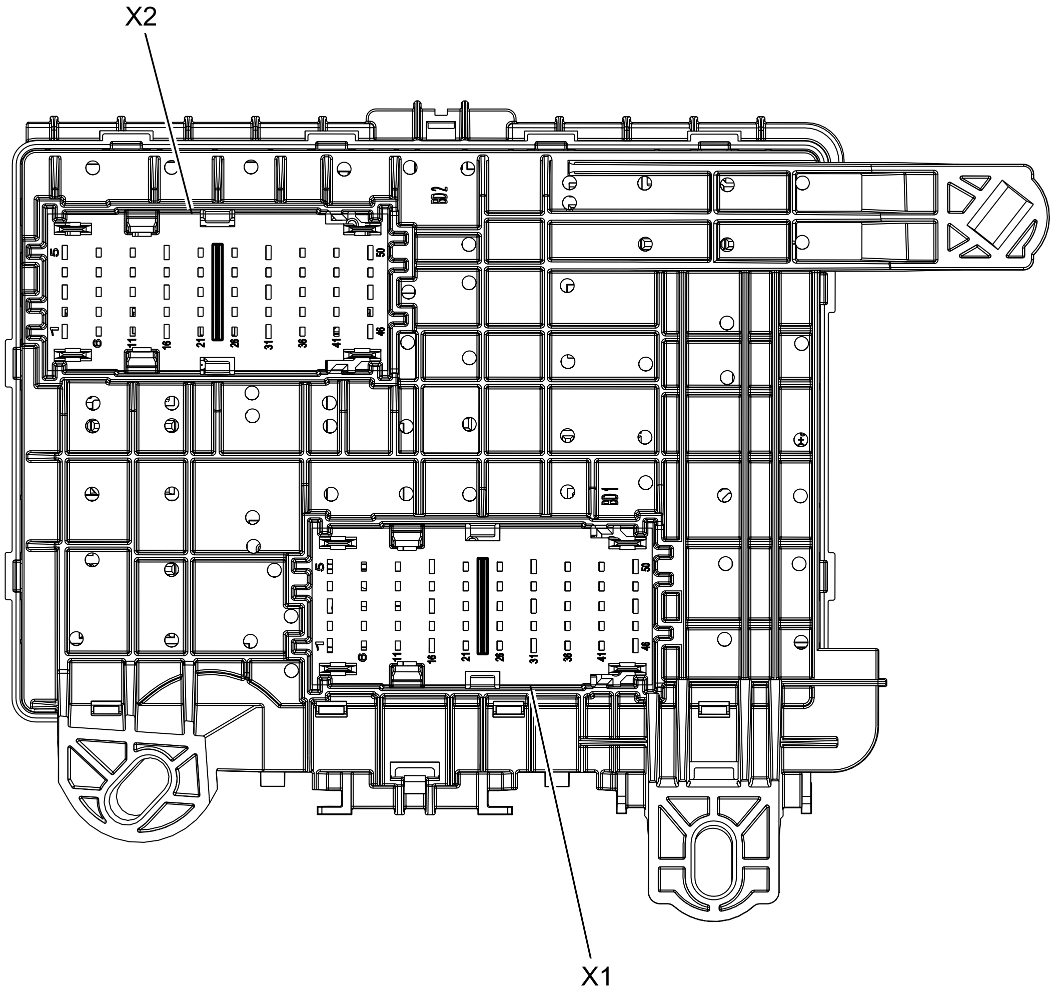
X53A Fuse Block - Rear Body X1 (5W4/9C1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	10	YE	5442	Endgate Window Regulator Up Signal	I	—

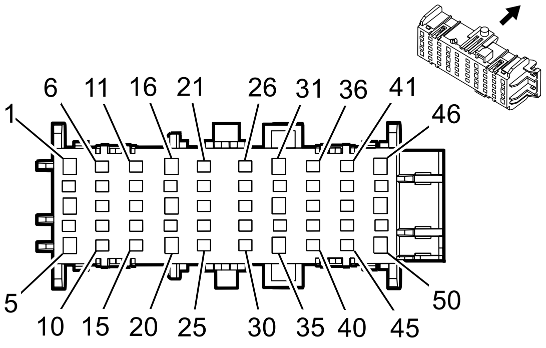
X61A Junction Block - Instrument Panel Top View


X7
X6
X3
SEO
HL
TR
IP2
BC1
X4
X8
IP1
BC2
X5
X9

X61A Junction Block - Instrument Panel Bottom View



X61A Junction Block - Instrument Panel X1



Connector Part Information

Harness Type: Body

OEM Connector: 33114819

Service Connector: 19301798

Description: 50-Way F 1.5, 2.8 OCS Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

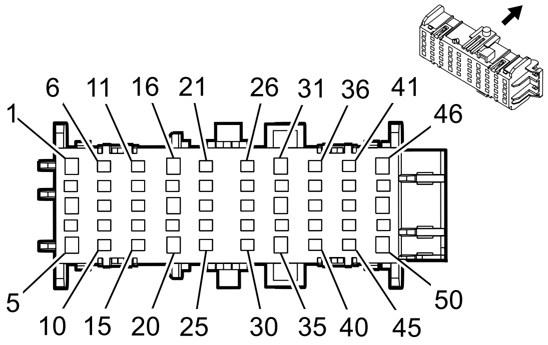
X61A Junction Block - Instrument Panel X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	GY/BK	1570	Front Axle Actuator Control	III	—
3 - 10	—	—	—	Not Occupied	—	—
11	0.35	GY/GN	2555	Rear Park Assist Disable Signal	III	—
12 - 15	—	—	—	Not Occupied	—	—
16	2.5	D-BU	965	—	II	—
17	—	—	—	Not Occupied	—	—
18	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
19	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	III	—

20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
21	0.5	RD/WH	961	—	III	—
22	0.35	VT	185	Low Washer Fluid Indicator Control	III	—
23	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	III	—
24	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	III	—
25	0.35	GY	5697	Child Lockout Indicator Control	III	—
26	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	III	—
27	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	III	—
28	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	III	—
29	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	III	—
30	0.5	GN/GY	963	—	III	—
31	2.5	GY/BK	966	—	II	—
32	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	III	—
33	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
34	0.5	YE/WH	962	—	III	—
35	2.5	YE/BN	967	—	II	—

36	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	III	—
37	—	—	—	Not Occupied	—	—
38	0.5	WH/D-BU	964	—	III	—
39	1	D-BU/VT	1134	Park Brake Switch Signal	III	—
40	0.5	GN	5060	Low Speed GMLAN Serial Data	III	—
41	0.5	GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	III	—
42	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	III	—
43	0.35	GN/VT	1601	Steering Column Lock Signal	III	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	III	—
45	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	III	—
46	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	I	—
47	0.5	WH	6816	Indicator Dimming Control	III	—
48	2.5	RD/GN	968	—	II	—
49	0.5	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	III	—
50	2.5	BK	2550	Ground	II	—

X61A Junction Block - Instrument Panel X2



Connector Part Information

Harness Type: Body

OEM Connector: 33115109

Service Connector: 19329464

Description: 50-Way F 1.5, 2.8 OCS Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575543	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	B	F
II	19301751	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X61A Junction Block - Instrument Panel X2

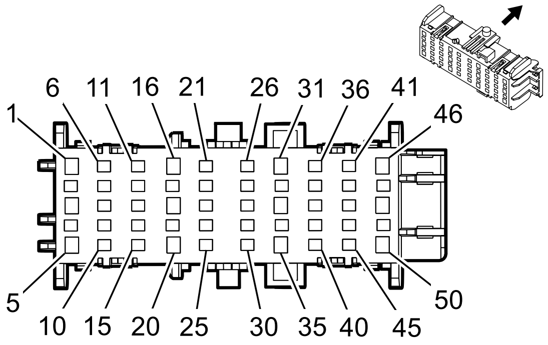
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	4	RD/GY	1342	Battery Positive Voltage	I	—
4	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	V	—
5	0.35 0.5	RD/GN RD/GN	3140 3140	Battery Positive Voltage Battery Positive Voltage	III III	— —
6	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	V	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	V	—

7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	V	—
8	0.35	WH/RD	6207	Memory Sensor High Reference	V	—
9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	V	—
10	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	V	—
11	0.35	D-BU	5952	Adjustable Pedal Position Sensor Brake Signal	V	—
12	0.75	YE	5129	Adjustable Pedal Actuator Rearward Control	V	—
	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	II	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	GN/WH	24	Backup Lamp Control	V	—
16	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	IV	—
	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	III	—
17	—	—	—	Not Occupied	—	—
18	4	BK	550	Ground	I	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	V	—
20	0.35	GN	6112	Power Lift Gate On/Off Switch Signal	III	—
21	0.75	GN/VT	5130	Adjustable Pedal Actuator Forward Control	V	—
	1.5	GN/VT	5130	Adjustable Pedal Actuator Forward Control	II	—
22	0.35	BK/GY	6206	Memory Sensor Low Reference	V	—

23	0.5	WH/BN	6815	Inadvertent Power Control	V	—
24	0.35	GN	2308	Passenger Air Bag Off Indicator Control	V	—
25	—	—	—	Not Occupied	—	—
26	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	V	—
27	0.35	VT	7476	Incremental Encoder Sensor Low Reference	V	—
28	—	—	—	Not Occupied	—	—
29	0.5	GY	157	Interior Lamp Control	V	—
30	0.35	GY	156	Courtesy Lamp Switch Signal	V	—
31	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
32	0.35	YE	7474	Incremental Encoder Direction Signal	V	—
33 - 34	—	—	—	Not Occupied	—	—
35	2.5	RD/GN	242	Battery Positive Voltage	IV	—
36	0.35	WH/GN	7475	Incremental Encoder Sensor 8V Reference	V	—
37	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	V	—
38	0.35	VT/YE	5985	Accessory Wakeup Serial Data	V	—
39	—	—	—	Not Occupied	—	—
40	0.35	GY/BK	6113	Rear Lift Gate Open/Close Switch Signal	V	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	V	—

43	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	V	—
44	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	V	—
45	—	—	—	Not Occupied	—	—
46	4	YE/GY	1552	Transfer Case Motor Clockwise Control	I	—
47	0.5	GN/GY	817	Vehicle Speed Signal	V	—
48	2.5	D-BU	47	Trailer Auxiliary Control	IV	—
49	0.35	WH	3152	Lane Departure Warning Indicator Control	V	—
50	0.35	VT/YE	43	Accessory Ignition Voltage	III	—

X61A Junction Block - Instrument Panel X3



Connector Part Information

Harness Type: Headliner

OEM Connector: 33115112

Service Connector: 19329467

Description: 50-Way F 1.5, 2.8 OCS Series (BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

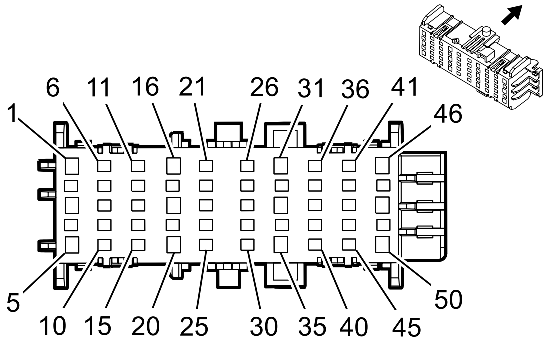
X61A Junction Block - Instrument Panel X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	RD/GN	3140	Battery Positive Voltage	II	—
4	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	IV	—
9	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	IV	—
10 - 12	—	—	—	Not Occupied	—	—
13	0.35	GN/RD	24	Backup Lamp Control	IV	—

14 - 16	—	—	—	Not Occupied	—	—
17	0.35	GN/BK	2515	Keypad Control	IV	—
18	0.35	GN	6112	Power Lift Gate On/Off Switch Signal	II	—
19	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
20	—	—	—	Not Occupied	—	—
21	0.35	GN/D-BU	2514	Keypad Signal	IV	—
22	0.35	YE/BN	2516	Keypad Green LED Control	IV	—
23	—	—	—	Not Occupied	—	—
24	0.35	GN/RD	2308	Passenger Air Bag Off Indicator Control	I	—
25	0.5	WH/BN	6815	Inadvertent Power Control	IV	—
26	—	—	—	Not Occupied	—	—
27	0.5	YE	6817	LED Backlight Dimming Control	IV	—
28	0.35	GY/D-BU	156	Courtesy Lamp Switch Signal	I	—
29	0.5	GY	157	Interior Lamp Control	IV	—
30 - 35	—	—	—	Not Occupied	—	—
36	0.35	BN/WH	2517	Keypad Red LED Control	IV	—
37	—	—	—	Not Occupied	—	—
38	0.35	GY/BK	6113	Rear Lift Gate Open/Close Switch Signal	I	—
39 - 40	—	—	—	Not Occupied	—	—

41	0.35	GY/GN	328	Interior Lamp Defeat Switch Signal	I	—
42	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
43 - 44	—	—	—	Not Occupied	—	—
45	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	IV	—
46	2.5	BK	1050	Ground	III	—
47	0.35	GN	5060	Low Speed GMLAN Serial Data	IV	—
48	—	—	—	Not Occupied	—	—
49	0.35	WH	3152	Lane Departure Warning Indicator Control	IV	—
50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X4



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33115111

Service Connector: 19329466

Description: 50-Way F 1.5, 2.8 OCS Series (GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X61A Junction Block - Instrument Panel X4

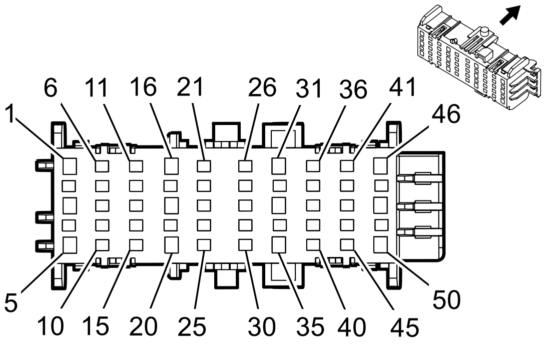
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	YE/VT	2516	Keypad Green LED Control	III	—
3	0.35	BK/GN	552	Sensor Low Reference	I	—
4	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	III	—
5	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
6	0.5	YE	6817	LED Backlight Dimming Control	III	—
7	0.35	GN/WH	2514	Keypad Signal	III	—

8	0.35	GY/RD	598	5V Reference	III	—
9	0.35	WH/GN	526	Stop Lamp Switch Signal	III	—
10	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	III	—
11	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	III	—
12 - 13	—	—	—	Not Occupied	—	—
14	0.35	BN	1560	Neutral Indicator Control	III	—
15	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	III	—
16	2.5	BK	1050	Ground	II	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.35	GN/BK	2515	Keypad Control	III	—
20	—	—	—	Not Occupied	—	—
21	0.5	VT/GN	7558	LED Ambient Lighting Control 2	III	—
22	0.35	BN/WH	2517	Keypad Red LED Control	III	—
23	0.35	BN/BK	1566	4 HI Indicator Control	III	—
24	0.35	VT/WH	1565	4 LO Indicator Control	III	—
25	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	III	—
26	0.35	WH	3152	Lane Departure Warning Indicator Control	III	—
27	0.35	GY/GN	328	Interior Lamp Defeat Switch Signal	III	—

28 - 29	—	—	—	Not Occupied	—	—
30	0.35	GY/GN	1561	AWD Indicator Control	III	—
31	1.5	RD/YE	2340	Battery Positive Voltage	II	—
32	0.5	BK/WH	1851	Signal Ground	III	—
33	0.35	BK/WH	1851	Signal Ground	I	-E29-Z75
	0.75	BK/WH	1851	Signal Ground	I	TG5
34	0.35	BK/WH	1851	Signal Ground	III	—
35	2.5	BK/WH	1851	Signal Ground	I	—
36	—	—	—	Not Occupied	—	—
37	0.35	BK/WH	1851	Signal Ground	III	—
38	0.5	BK/WH	1851	Signal Ground	III	—
39	0.35	BK/WH	1851	Signal Ground	III	—
40	0.35	GN/BK	1563	2 HI Indicator Control	III	—
41	0.35	BK/WH	1851	Signal Ground	III	—
42	0.35	BK/WH	1851	Signal Ground	III	—
43	0.35	BK/WH	1851	Signal Ground	III	—
44	0.35	BK	2550	Ground	III	—

45	0.35	BK	2550	Ground	III	—
46	0.35	BK	2550	Ground	I	-E29-Z75
	0.75	BK	2550	Ground	I	TG5
47	0.35	BK	2550	Ground	III	—
48	0.5	BK	2550	Ground	I	-E29-Z75
	0.75	BK	2550	Ground	I	TG5
49	0.35	BK	2550	Ground	III	—
50	0.75	BK	2550	Ground	I	—

X61A Junction Block - Instrument Panel X5



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33115110

Service Connector: 19329465

Description: 50-Way F 1.5, 2.8 OCS Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

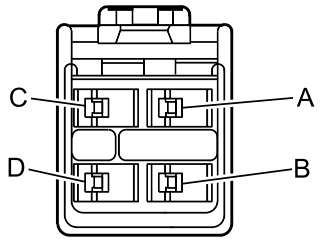
X61A Junction Block - Instrument Panel X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
2	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
3	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	II	—
7	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	II	—
8	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	II	—
9	0.35	VT	185	Low Washer Fluid Indicator Control	II	—

10	0.5	RD/WH	961	—	II	—
11	0.5	GN/GY	963	—	II	—
12	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	II	—
13	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	II	—
14	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	II	—
15	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	II	—
16	—	—	—	Not Occupied	—	—
17	0.5	YE/WH	962	—	II	—
18	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
19	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
20 - 21	—	—	—	Not Occupied	—	—
22	0.5	D-BU/VT	1134	Park Brake Switch Signal	II	—
23	0.5	WH/D-BU	964	—	II	—
24	—	—	—	Not Occupied	—	—
25	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	II	—
26	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	II	—
27	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—

28	0.35	GN/VT	1601	Steering Column Lock Signal	II	—
29	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	II	—
30	0.5	GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	II	—
31	—	—	—	Not Occupied	—	—
32	0.5	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	II	—
33	—	—	—	Not Occupied	—	—
34	0.5	WH	6816	Indicator Dimming Control	II	—
35 - 36	—	—	—	Not Occupied	—	—
37	0.35	WH	6816	Indicator Dimming Control	II	—
38	0.35	WH	6816	Indicator Dimming Control	II	—
39	0.5	WH	6816	Indicator Dimming Control	II	—
40 - 44	—	—	—	Not Occupied	—	—
45	0.35	GY/GN	2555	Rear Park Assist Disable Signal	II	—
46 - 50	—	—	—	Not Occupied	—	—

X61A Junction Block - Instrument Panel X6



Connector Part Information

Harness Type: Trailer Tow

OEM Connector: 12194033

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 280 Metri-Pack Flexlock Series (CR)

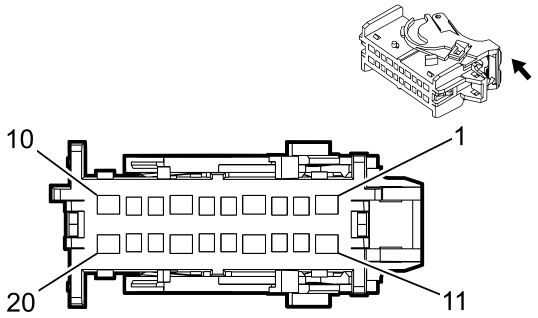
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X61A Junction Block - Instrument Panel X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK	1050	Ground	I	—
B	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	I	—
C	2.5	RD/GN	242	Battery Positive Voltage	I	—
D	2.5	D-BU	47	Trailer Auxiliary Control	I	—

X61A Junction Block - Instrument Panel X7



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15547108

Service Connector: 13597271

Description: 20-Way F 1.5, 2.8 OCS Series (NA)

Terminal Part Information

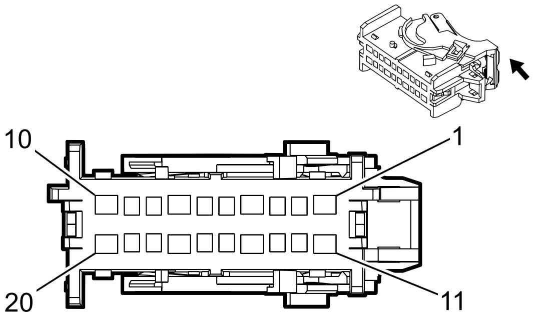
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X61A Junction Block - Instrument Panel X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/GN	968	—	II	—
2 - 3	—	—	—	Not Occupied	—	—
4	2.5	YE/BN	967	—	II	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.5	VT/YE	43	Accessory Ignition Voltage	III	—
9	—	—	—	Not Occupied	—	—
10	0.5	BK	1050	Ground	I	—
11	0.5	VT/WH	1939	Run/Crank Ignition 1 Voltage	I	—
12 - 13	—	—	—	Not Occupied	—	—

12 - 13	—	—	—	Not Occupied	—	—
14	2.5	GY/BK	966	—	II	—
15 - 18	—	—	—	Not Occupied	—	—
19	0.5	GN/GY	817	Vehicle Speed Signal	III	—
20	2.5	D-BU	965	—	II	—

X61A Junction Block - Instrument Panel X8



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 15547106

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 1.5, 2.8 OCS Series (BK)

Terminal Part Information

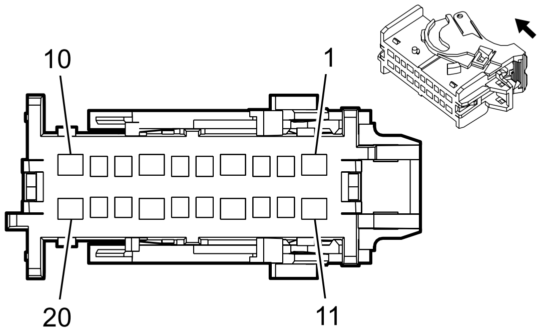
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X61A Junction Block - Instrument Panel X8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 7	—	—	—	Not Occupied	—	—
8	0.5	WH/GN	526	Stop Lamp Switch Signal	I	—
9	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
10	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
11	—	—	—	Not Occupied	—	—
12	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
13	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
14	0.5	WH/RD	6207	Memory Sensor High Reference	II	—

15	0.5	D-BU	5952	Adjustable Pedal Position Sensor Brake Signal	I	—
16	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	I	—
17	0.5	BK/GY	6206	Memory Sensor Low Reference	II	—
18	1.5	GN/VT	5130	Adjustable Pedal Actuator Forward Control	I	—
19	0.5	BK/GN	552	Sensor Low Reference	I	—
20	0.5	GY/RD	598	5V Reference	II	—

X61A Junction Block - Instrument Panel X9



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 15547107

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 1.5, 2.8 OCS Series (GY)

Terminal Part Information

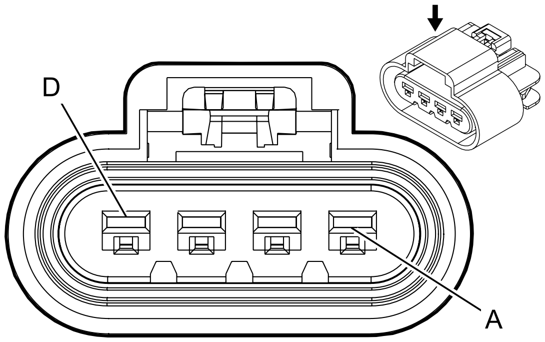
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X61A Junction Block - Instrument Panel X9

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	II	—
2	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—
3	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
4	0.35	BN/BK	1566	4 HI Indicator Control	II	—
5	0.35	VT/WH	1565	4 LO Indicator Control	I	—
6	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
7	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II	—

8	0.35	GN/BK	1563	2 HI Indicator Control	I	—
9	0.35	GY/GN	1561	AWD Indicator Control	I	—
10	0.5	GY/BK	1570	Front Axle Actuator Control	II	—
11	3	RD/GY	1342	Battery Positive Voltage	II	—
12	0.35	BN	1560	Neutral Indicator Control	I	—
13	0.35	VT	7476	Incremental Encoder Sensor Low Reference	I	—
14	3	BK	550	Ground	II	—
15	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
16	0.35	YE	7474	Incremental Encoder Direction Signal	I	—
17	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	II	—
18	0.35	WH/GN	7475	Incremental Encoder Sensor 8V Reference	I	—
19	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
20	4	YE/GY	1552	Transfer Case Motor Clockwise Control	II	—

A6D Fuel Pump and Level Sensor Assembly - Secondary



Connector Part Information

Harness Type: Chassis

OEM Connector: 13521459

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 280 GT Series, Sealed (BK)

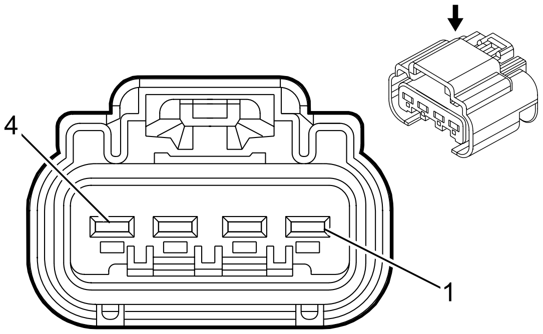
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A6D Fuel Pump and Level Sensor Assembly - Secondary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	BK	2150	Ground	I	—
	4	BK	2150			—
B	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
C	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—
	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal		—
D	1.5	GY	120	Fuel Pump Control	I	—
	2.5	GY	120			—

A7 Fuel Pump and Level Sensor Assembly



Connector Part Information

Harness Type: Chassis

OEM Connector: 13527865

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 280 GT Series, Sealed (NA)

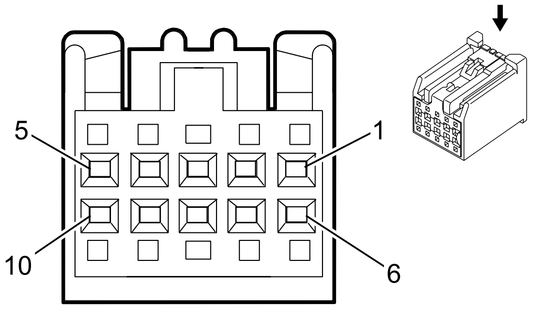
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A7 Fuel Pump and Level Sensor Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	BK/GN	1580	Fuel Pump Low Reference	I	—
3	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
4	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—

A10 Inside Rearview Mirror X1



Connector Part Information

Harness Type: Headliner

OEM Connector: 13815336

Service Connector: 13577390

Description: 10-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

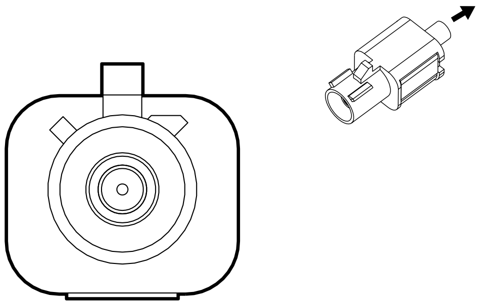
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

A10 Inside Rearview Mirror X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/RD	24	Backup Lamp Control	I	—
2	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
3	— 0.35	— GN/D-BU	— 2514	— Keypad Signal	II I	DRZ -DRZ
4	— 0.35	— GN/BK	— 2515	— Keypad Control	II I	DRZ -DRZ
5	0.5	BK	1050	Ground	I	—
6	—	—	—	—	II	DRZ

	0.35	YE/BN	2516	Keypad Green LED Control	I	-DRZ
7	—	—	—	—	II	DRZ
	0.35	BN/WH	2517	Keypad Red LED Control	I	-DRZ
8	0.35	BK/YE	1691	Automatic Day/Night Mirror Low Reference	I	—
9	0.35	YE/WH	1690	Automatic Day/Night Mirror Signal	I	—
10	—	—	—	Not Occupied	—	—

A10 Inside Rearview Mirror X2 (DRZ)



Connector Part Information

Harness Type: —

OEM Connector: Not Available

Service Connector: Service by Cable Assembly - See Part Catalog

Description: 1-Way M Coax Type (BK)

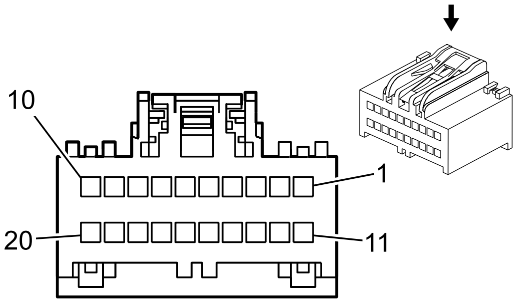
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	—	—	—	—
II	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

A10 Inside Rearview Mirror X2 (DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
C	—	—	6208	Coaxial Camera Signal	I	—
S	—	—	6209	Coaxial Camera Low Reference	II	—

A11 Radio X1



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15491304

Service Connector: 15126710

Description: 20-Way F USCAR 64 Series (GY)

Terminal Part Information

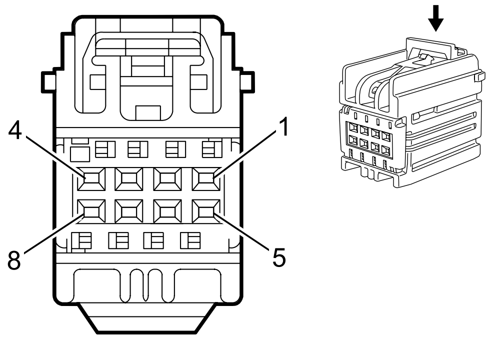
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I		J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	Not Available	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
III	Pending	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

A11 Radio X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	WH/D-BU	6973	Camera Signal 2	II	—
5	0.35	GY/YE	6972	Camera Signal 2 +	III	—
	0.35	GY/YE	6972		II	—
6	0.5	BARE	5842	Auxiliary Audio Screen 2	II	—
	0.5	BARE	5842		III	—
7	0.35	D-BU	2060	Auxiliary Detection Signal	II	—
	0.35	D-BU	2060		III	—

8	0.35	VT	5843	Auxiliary Audio Common Signal	II	—
	0.35	VT	5843		III	—
9	0.35	GY	5839	Left Auxiliary Audio Signal 2	II	—
	0.35	GY	5839		III	—
10	0.35	GN	5841	Right Auxiliary Audio Signal 2	III	—
	0.35	GN	5841		II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	II	—
14	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	II	—
	0.5	GY/GN	1102		III	—
	0.5	GY/GN	1102		I	—
15 - 18	—	—	—	Not Occupied	—	—
19	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	III	—
	0.35	BK/YE	659		II	—
20	0.35	YE	658	Cellular Telephone Voice Signal	II	—
	0.35	YE	658		III	—

A11 Radio X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13551679

Service Connector: 19115653

Description: 8-Way F YESC Kaizen Series (L-GY)

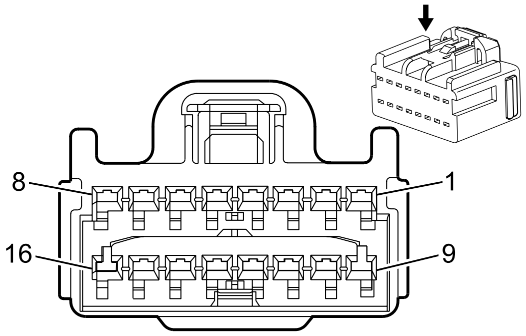
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A11 Radio X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
2	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
3	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.35	WH/VT	3999	MOST Control	I	—
8	—	—	—	Not Occupied	—	—

A11 Radio X3



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10847013

Service Connector: 89047090

Description: 16-Way F 1.5 Kaizen Series (GN)

Terminal Part Information

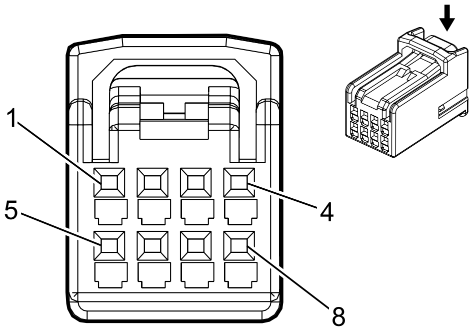
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

A11 Radio X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU	201	Left Front Speaker Control (+) 1	I	—
2	0.75	YE	200	Right Front Speaker Control (+) 1	I	—
3	0.5	GN	199	Left Rear Speaker Control (+)	I	—
4	0.5	WH	46	Right Rear Speaker Control (+)	I	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.75	RD/VT	340	Battery Positive Voltage	I	—
9	0.75	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
10	0.75	YE/BK	117	Right Front Speaker Signal (-) 1	I	—

11	0.5	GN/BK	116	Left Rear Speaker Signal (-)	I	—
12	0.5	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.75	BK	2550	Ground	I	—

A14D Seat Lumbar Support Pump - Driver



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: MX34E08SF1

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series (GY)

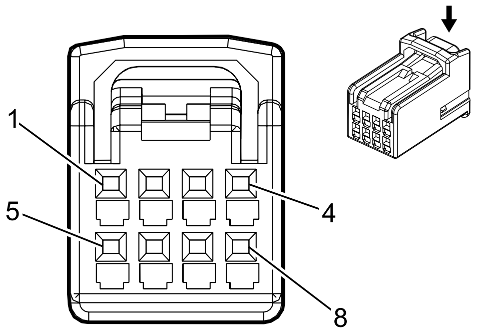
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

A14D Seat Lumbar Support Pump - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/BN	768	Driver Power Seat Lumbar Motor Up Control	I	—
2	0.75	VT	610	Driver Power Seat Lumbar Motor Rearward Control	I	—
3	0.75	YE/BU	767	Driver Power Seat Lumbar Motor Down Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.75	BU	611	Driver Power Seat Lumbar Motor Forward Control	I	—
6 - 8	—	—	—	Not Occupied	—	—

A14P Seat Lumbar Support Pump - Passenger



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: MX34E08SF1

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series (GY)

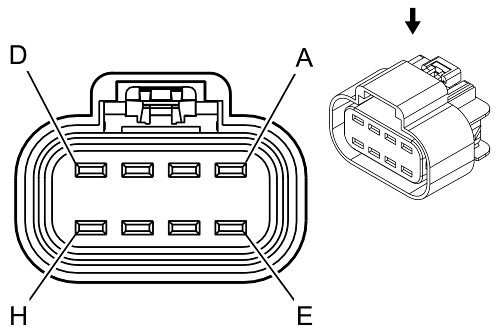
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A14P Seat Lumbar Support Pump - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/YE	793	Passenger Power Seat Lumbar Motor Up Control	I	—
2	0.75	VT	210	Passenger Power Seat Lumbar Motor Rearward Control	I	—
3	0.75	BU/YE	792	Passenger Power Seat Lumbar Motor Down Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.75	BU	211	Passenger Power Seat Lumbar Motor Forward Control	I	—
6 - 8	—	—	—	Not Occupied	—	—

A16 Transfer Case Motor



Connector Part Information

Harness Type: Engine

OEM Connector: 13669205

Service Connector: 19300464

Description: 8-Way F 280 GT Series, Sealed (BK)

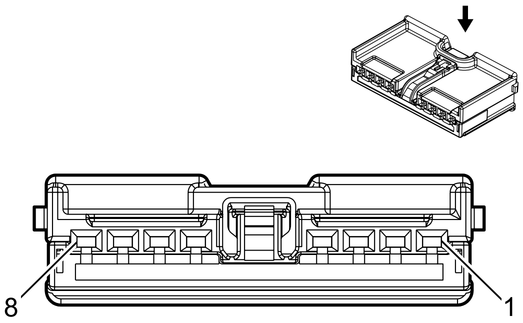
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A16 Transfer Case Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	OG	1552	Transfer Case Motor Clockwise Control	I	—
B	3	RD/GY	1342	Battery Positive Voltage	I	—
C	2.5	YE/BN	1569	Transfer Case Lock Solenoid Control	I	—
D	3	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
F	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
G	0.5	WH/GN	7475	Incremental Encoder Sensor 8V Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

A23C Liftgate Latch Assembly (TB5/TC2)



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13827492

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 1.5 Series (BK)

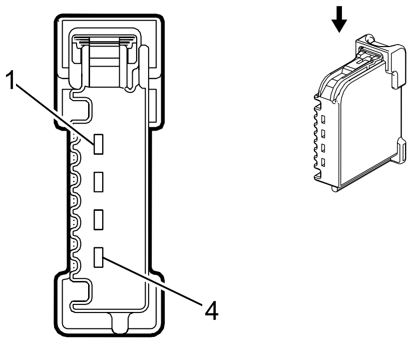
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23C Liftgate Latch Assembly (TB5/TC2)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	3988	Detent Lift Gate Signal	I	—
2	0.35	VT/GN	3987	Cinch Latch Lift Gate Signal	I	—
3	0.35	GN/WH	6127	Lift Gate Unlatch Switch Signal	I	—
4	0.5	GY	3986	Cinch Latch Lift Gate Stall Motor Release Signal	I	—
5	0.35	D-BU/BK	6000	Lift Gate Ajar Switch Signal 2	I	—
6	0.5	BK/VT	5801	Lift Gate Object Sensor Low Reference	I	—
7	1	BN	5790	Lift Gate Cinch Latch Motor Open Control	I	—
8	1	D-BU/GY	5791	Lift Gate Cinch Latch Motor Close Control	I	—

A23C Liftgate Latch Assembly (-TB5/TC2)



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13607335

Service Connector: Service by Harness - See Part Catalog

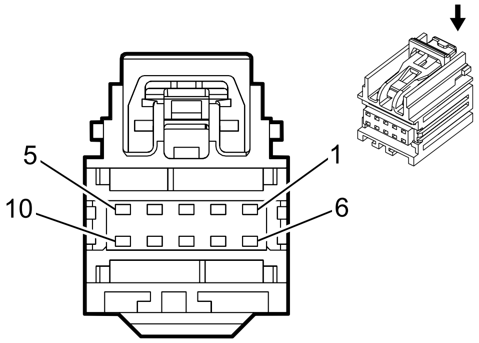
Description: 4-Way F 1.5 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23C Liftgate Latch Assembly (-TB5/TC2)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1450	Ground	I	—
2	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal 1	I	—
3	0.5	D-BU/WH	6128	Rear Closure Unlatch Motor Unlatch Control	I	—
4	—	—	—	Not Occupied	—	—



Connector Part Information

Harness Type: Driver Door

OEM Connector: 33110655

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 YESC Kaizen Series (GN)

Terminal Part Information

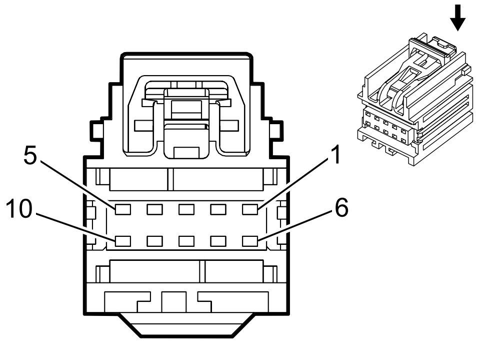
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23D Door Latch Assembly - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	745	Left Front Door Ajar Switch Signal	I	—
2	0.35	WH/YE	3574	Driver Door Open Switch Signal	I	—
3	0.5	BK	1150	Ground	I	—
4	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	I	—
5	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	I	—
6	0.75	BN	5910	Door Double Lock Actuator Lock Control	I	—
7	0.75	GY	5911	Door Lock Actuator Lock Control 2	I	—
8	0.75	BN/BK	294	Door Lock Actuator Unlock Control	I	—

9 - 10	—	—	—	Not Occupied	—	—

A23LR Door Latch Assembly - Left Rear



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 33110655

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 YESC Kaizen Series (GN)

Terminal Part Information

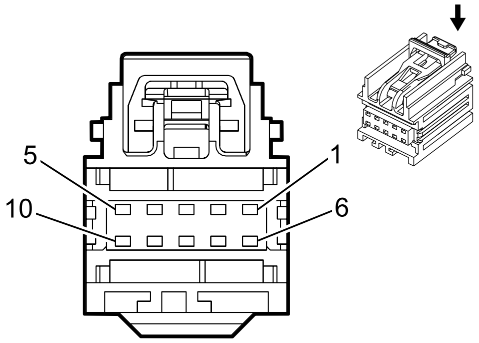
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23LR Door Latch Assembly - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/WH	747	Left Rear Door Ajar Switch Signal	I	—
2	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	I	—
3	0.5	BK	1150	Ground	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.75	BN	5910	Door Double Lock Actuator Lock Control	I	—
7	0.75	GY	295	Door Lock Actuator Lock Control	I	—
8	0.75	BN/YE	294	Door Lock Actuator Unlock Control	I	—
9	0.75	WH/D-BU	3266	Child Security Lock Motor Lock Control	I	—
10	—	—	—	Not Occupied	—	—

10	—	—	—	Not Occupied	—	—

A23P Door Latch Assembly - Passenger



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 33110655

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 YESC Kaizen Series (GN)

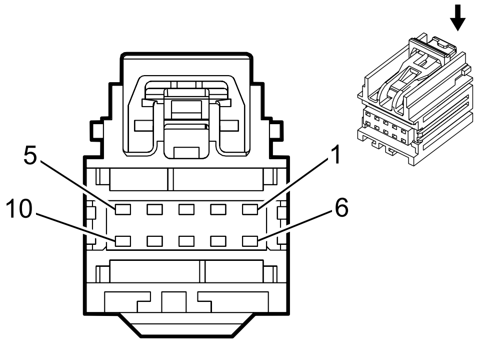
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23P Door Latch Assembly - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.75	BN/YE	294	Door Lock Actuator Unlock Control	I	—
9	0.75	GY	295	Door Lock Actuator Lock Control	I	—
10	0.75	BN	5910	Door Double Lock Actuator Lock Control	I	—

A23RR Door Latch Assembly - Right Rear



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 33110655

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 YESC Kaizen Series (GN)

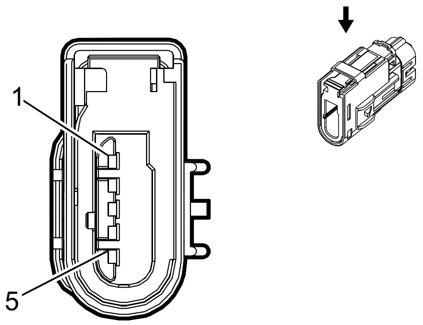
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A23RR Door Latch Assembly - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK	1250	Ground	I	—
4	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	I	—
5	0.35	GY/WH	748	Right Rear Door Ajar Switch Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	WH/D-BU	3266	Child Security Lock Motor Lock Control	I	—
8	0.75	BN/YE	294	Door Lock Actuator Unlock Control	I	—
9	0.75	GY	295	Door Lock Actuator Lock Control	I	—
10	0.75	BN	5910	Door Double Lock Actuator Lock Control	I	—

A24LR Door Handle Assembly - Left Rear Exterior (X88/Z88)



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13915623

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (BK)

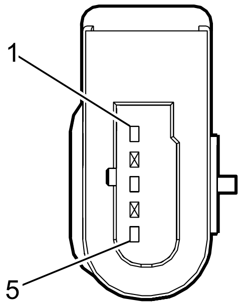
Terminal Part Information

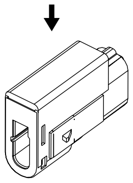
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24LR Door Handle Assembly - Left Rear Exterior (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/YE	6157	Left Rear Door Handle Switch Signal	I	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.5	BK	1150	Ground	I	—

A24LR Door Handle Assembly - Left Rear Exterior (Z75)





Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13939427

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (BN)

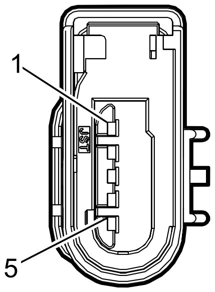
Terminal Part Information

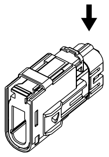
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24LR Door Handle Assembly - Left Rear Exterior (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/YE	6157	Left Rear Door Handle Switch Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	BK	1150	Ground	I	—

A24P Door Handle Assembly - Passenger Exterior (ATH+(X88/Z88))





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13934096

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (L-GY)

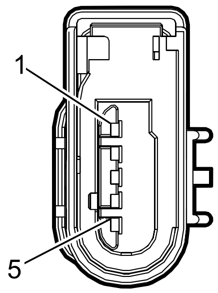
Terminal Part Information

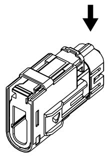
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24P Door Handle Assembly - Passenger Exterior (ATH+(X88/Z88))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/WH	3571	Passenger Door Handle Switch Signal	I	—
2	0.35	GN/YE	3562	Passive Entry Passenger Door Antenna Signal Hi	I	—
3	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
4	0.35	GN/BK	3563	Passive Entry Passenger Door Antenna Signal Lo	I	—
5	0.5	BK	1250	Ground	I	—

A24P Door Handle Assembly - Passenger Exterior (Z75)





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13915624

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (NA)

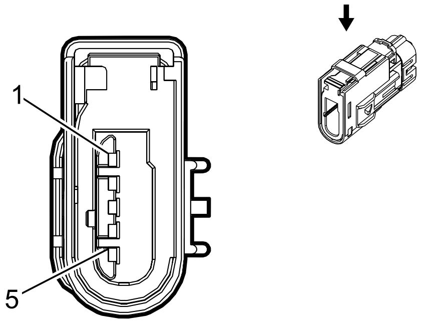
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24P Door Handle Assembly - Passenger Exterior (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/WH	3571	Passenger Door Handle Switch Signal	I	—
2	0.35	GN/YE	3562	Passive Entry Passenger Door Antenna Signal Hi	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	GN/BK	3563	Passive Entry Passenger Door Antenna Signal Lo	I	—
5	0.5	BK	1250	Ground	I	—

A24RR Door Handle Assembly - Right Rear Exterior (X88/Z88)



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13915623

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (BK)

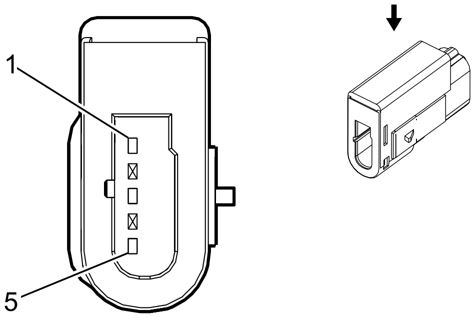
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24RR Door Handle Assembly - Right Rear Exterior (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/GY	6158	Right Rear Door Handle Switch Signal	I	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.5	BK	1250	Ground	I	—

A24RR Door Handle Assembly - Right Rear Exterior (Z75)



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13939427

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (BN)

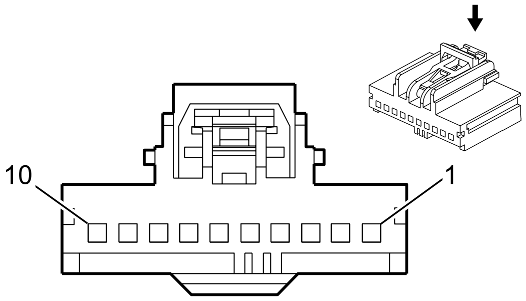
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A24RR Door Handle Assembly - Right Rear Exterior (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/GY	6158	Right Rear Door Handle Switch Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	BK	1250	Ground	I	—

A33 Media Disc Player X1 (TG5)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15490628

Service Connector: 89047355

Description: 10-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

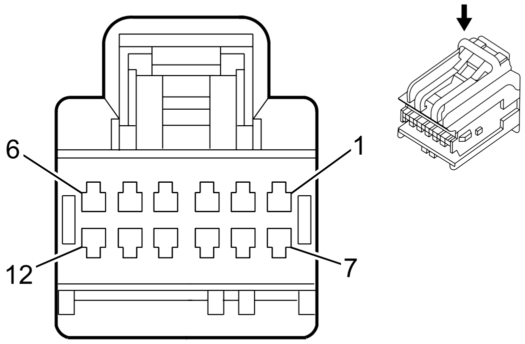
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300631	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

A33 Media Disc Player X1 (TG5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/VT	3999	MOST Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
5	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
6	0.5	GY/VT	3998	MOST Serial Data (+)	II	—
7	—	—	—	Not Occupied	—	—
8	0.75	BK	2550	Ground	I	—

9	0.35	GY	4016	Remote Media Eject Signal	II	—
10	0.75	RD/VT	340	Battery Positive Voltage	I	—

A33 Media Disc Player X1 (U42)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13551678

Service Connector: 89047364

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

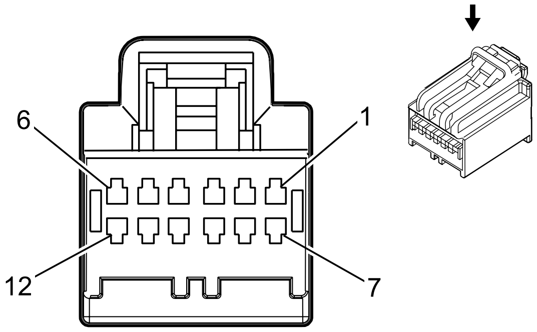
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300631	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

A33 Media Disc Player X1 (U42)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/VT	340	Battery Positive Voltage	II	—
2	0.35	GY	4016	Remote Media Eject Signal	II	—
3	0.5	WH/GN	3997	MOST Serial Data (-)	II	—
4	0.5	GY/VT	3998	MOST Serial Data (+)	II	—
5	0.5	WH/GN	3997	MOST Serial Data (-)	II	—
6	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
7	0.5	BK	2550	Ground	II	—

8	0.35	GN/YE	7066	Entertainment Remote Enable Signal	II	—
9	—	—	—	Not Occupied	—	—
10	0.35	WH/VT	3999	MOST Control	II	—
11	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	II	—
12	—	—	—	Not Occupied	—	—

A33 Media Disc Player X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13587624

Service Connector: 19151154

Description: 12-Way F 64 Series, Sealed (GY)

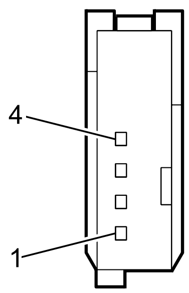
Terminal Part Information

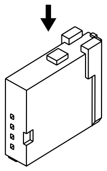
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

A33 Media Disc Player X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/WH	3355	Left Rear Seat Audio Headphone Signal	I	—
2	0.35	BN/GY	3357	Right Rear Seat Audio Headphone Signal	I	—
3	0.35	D-BU/VT	3356	Rear Seat Audio Headphone Common Signal	I	—
4	0.5	BARE	3354	Rear Seat Audio Headphone Low Reference	I	—
5 - 12	—	—	—	Not Occupied	—	—

A34 HVAC Controls - Auxiliary (AZ3)





Connector Part Information

Harness Type: Headliner

OEM Connector: 13820711

Service Connector: 19300398

Description: 4-Way F 0.64 Series (BK)

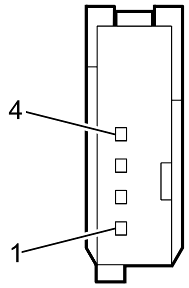
Terminal Part Information

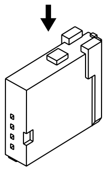
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A34 HVAC Controls - Auxiliary (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
4	0.5	BK	1050	Ground	I	—

A34 HVAC Controls - Auxiliary (X88/Z88+D07)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 13820711

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

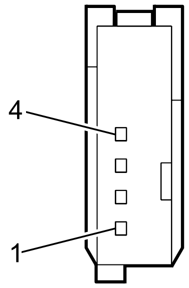
Terminal Part Information

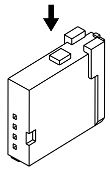
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A34 HVAC Controls - Auxiliary (X88/Z88+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

A34 HVAC Controls - Auxiliary (X88/Z88+DCK)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 13820711

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

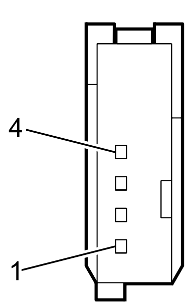
Terminal Part Information

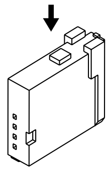
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A34 HVAC Controls - Auxiliary (X88/Z88+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

A34 HVAC Controls - Auxiliary (Z75+D07)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 13820711

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

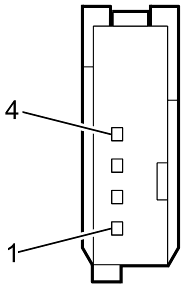
Terminal Part Information

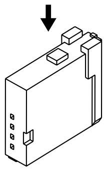
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A34 HVAC Controls - Auxiliary (Z75+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

A34 HVAC Controls - Auxiliary (Z75+DCK)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 13820711

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

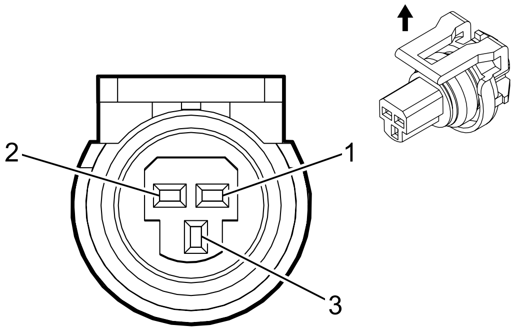
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

A34 HVAC Controls - Auxiliary (Z75+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

B1 A/C Refrigerant Pressure Sensor



Connector Part Information

Harness Type: Engine

OEM Connector: 13846842

Service Connector: 19301715

Description: 3-Way F 150 GT Series, Sealed (BK)

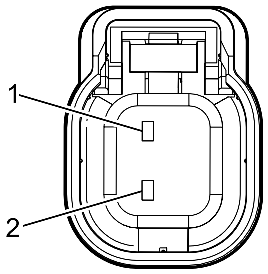
Terminal Part Information

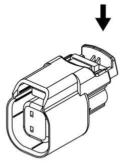
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B1 A/C Refrigerant Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
2	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
3	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	I	—

B5LF Wheel Speed Sensor - Left Front





Connector Part Information

Harness Type: Chassis

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

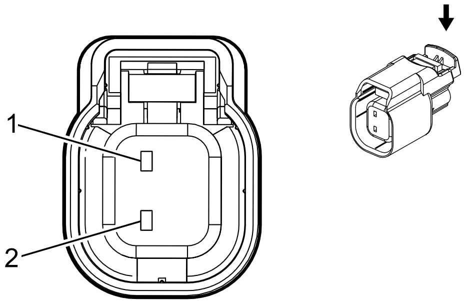
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B5LF Wheel Speed Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/GN	7064	Wheel Speed Sensor Control Left Front	I	—
2	0.5	GY	830	Wheel Speed Sensor Signal Left Front	I	—

B5LR Wheel Speed Sensor - Left Rear



Connector Part Information

Harness Type: Chassis

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

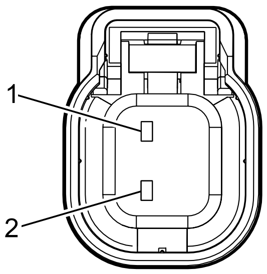
Terminal Part Information

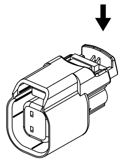
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B5LR Wheel Speed Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	I	—
2	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	I	—

B5RF Wheel Speed Sensor - Right Front





Connector Part Information

Harness Type: Chassis

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

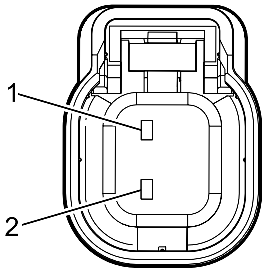
Terminal Part Information

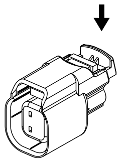
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B5RF Wheel Speed Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	I	—
2	0.5	YE	872	Wheel Speed Sensor Signal Right Front	I	—

B5RR Wheel Speed Sensor - Right Rear





Connector Part Information

Harness Type: Chassis

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

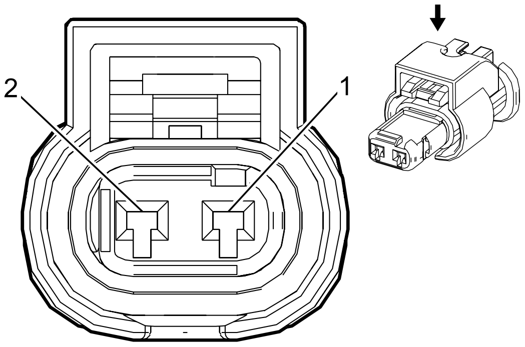
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B5RR Wheel Speed Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	I	—
2	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	I	—

B9 Ambient Air Temperature Sensor



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13927761

Service Connector: 19300402

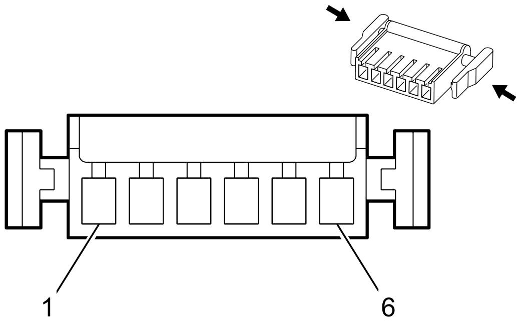
Description: 2-Way F 1.2 MCP Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B9 Ambient Air Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
2	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13726957

Service Connector: 13576539

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

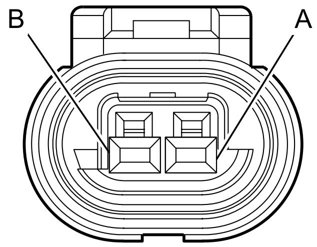
Terminal Part Information

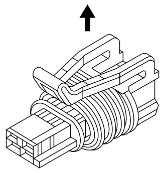
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B10B Ambient Light/Sunload Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	728	Security Indicator Control	I	—
2	0.35	GY	590	Solar Sensor Driver Signal	I	—
3	0.35	D-BU/WH	734	Inside Air Temperature Sensor Signal	I	—
4	0.35	YE/VT	1783	Twilight Sentinel Delay Signal	I	—
5	0.35	WH/D-BU	278	Ambient Light Sensor Signal	I	—
6	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—

B14A Transmission Output Shaft Speed Sensor





Connector Part Information

Harness Type: Engine

OEM Connector: 15449028

Service Connector: 88987993

Description: 2-Way F 150 GT Series, Sealed (BK)

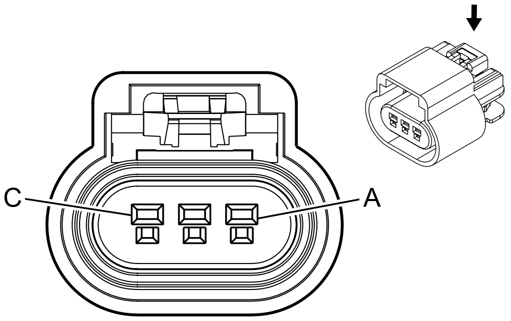
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B14A Transmission Output Shaft Speed Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/GN	822	Vehicle Speed Sensor Low Reference	I	—

B18 Battery Current Sensor



Connector Part Information

Harness Type: Engine

OEM Connector: 13519047

Service Connector: 13580871

Description: 3-Way F 150 GT Series, Sealed (BK)

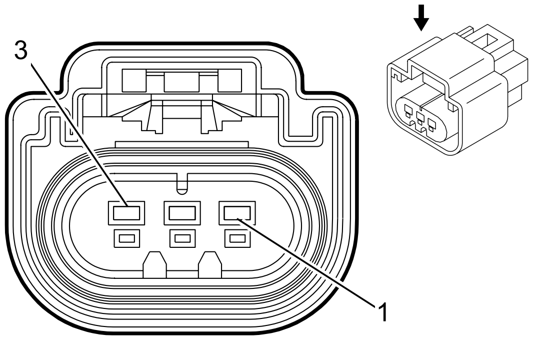
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B18 Battery Current Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/VT	5076	Current Sensor Control	I	—
B	0.5	BK/VT	5077	Current Sensor Low Reference	I	—
C	0.5	WH/YE	5075	Current Sensor Signal	I	—

B19B Brake Booster Vacuum Sensor



Connector Part Information

Harness Type: Chassis

OEM Connector: 13511996

Service Connector: 13580873

Description: 3-Way F 150 GT Series, Sealed (GY)

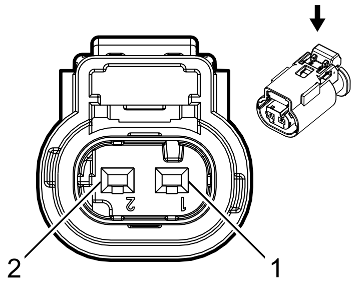
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B19B Brake Booster Vacuum Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/VT	6030	Brake Vacuum Sensor Signal	I	—
2	0.5	BK/YE	6032	Brake Vacuum Sensor Low Reference	I	—
3	0.5	YE/RD	6031	Brake Vacuum Sensor 5V Reference	I	—

B20 Brake Fluid Level Switch



Connector Part Information

Harness Type: Chassis

OEM Connector: 13735326

Service Connector: 13587326

Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

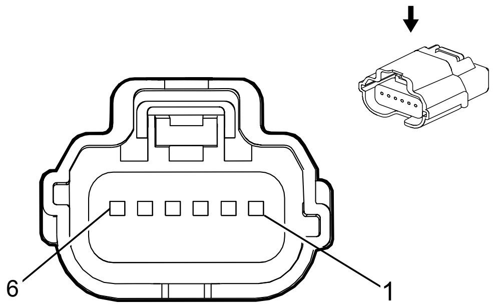
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B20 Brake Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	2150	Ground	I	SERIES10
	0.75	BK	2150	Ground	I	X88
2	0.5	GN/GY	333	Brake Fluid Level Sensor Signal	I	—

B22 Brake Pedal Position Sensor



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 13893502

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 64 Series, Sealed (NA)

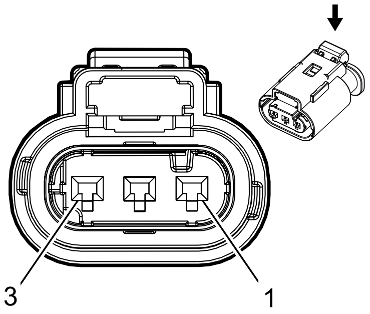
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B22 Brake Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/GN	552	Sensor Low Reference	I	—
2	0.5	GY/RD	598	5V Reference	I	—
3	0.5	WH/GN	526	Stop Lamp Switch Signal	I	—
4	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	—
5	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	—
6	0.5	WH	5359	Brake Apply Sensor Control	I	—

B23 Camshaft Position Sensor



Connector Part Information

Harness Type: Camshaft Position Sensor Jumper

OEM Connector: 13763990

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

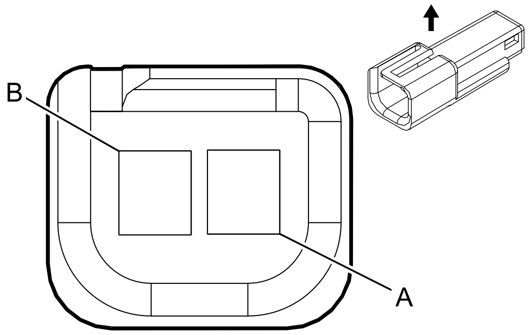
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B23 Camshaft Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
2	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
3	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—

B24 Mobile Telephone Microphone



Connector Part Information

Harness Type: Headliner

OEM Connector: 12047663

Service Connector: 13584278

Description: 2-Way M 150 Metri-Pack Series (BK)

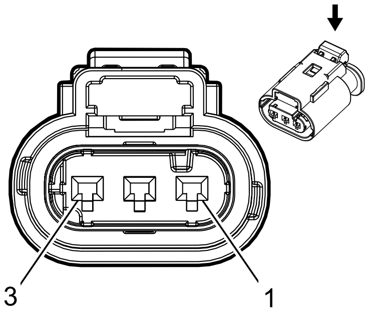
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B24 Mobile Telephone Microphone

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	—
B	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	—

B26 Crankshaft Position Sensor ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13763990

Service Connector: 19299690

Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

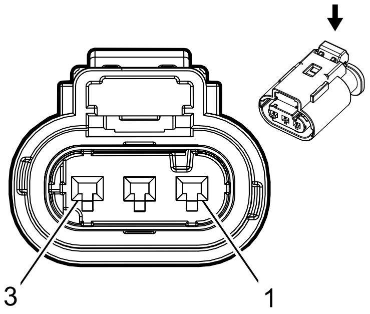
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B26 Crankshaft Position Sensor ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	—
2	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
3	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—

B26 Crankshaft Position Sensor (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13763990

Service Connector: 19299690

Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

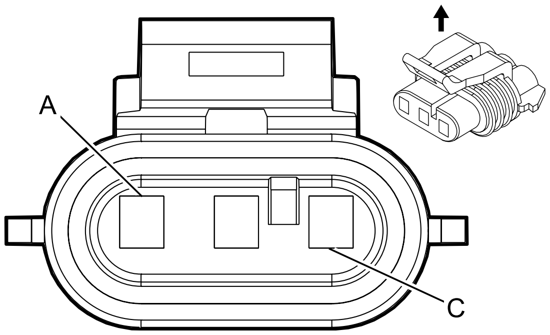
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B26 Crankshaft Position Sensor (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	—
2	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
3	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—

B26 Crankshaft Position Sensor (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 13838337

Service Connector: 19329936

Description: 3-Way F 150 Metri-Pack Series, Sealed (GY)

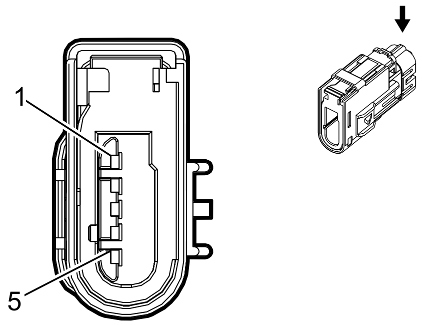
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B26 Crankshaft Position Sensor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	—
B	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
C	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—

B27D Door Handle Switch - Driver Exterior (X88/Z88)



Connector Part Information

Harness Type: Driver Door

OEM Connector: 13915624

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (NA)

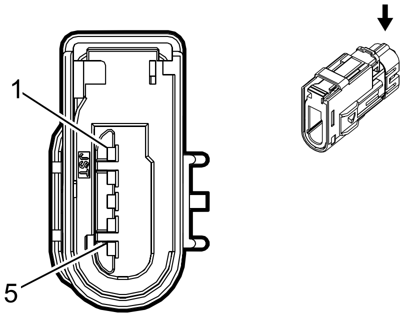
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B27D Door Handle Switch - Driver Exterior (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/WH	3570	Driver Door Handle Switch Signal	I	—
2	0.35	VT	3560	Passive Entry Driver Door Antenna Signal Hi	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	VT/GY	3561	Passive Entry Driver Door Antenna Signal Lo	I	—
5	0.5	BK	1150	Ground	I	—

B27D Door Handle Switch - Driver Exterior (Z75)



Connector Part Information

Harness Type: Driver Door

OEM Connector: 13934096

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (L-GY)

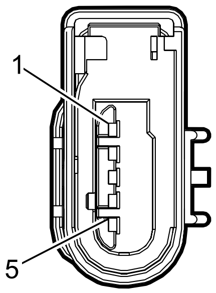
Terminal Part Information

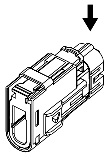
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B27D Door Handle Switch - Driver Exterior (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/WH	3570	Driver Door Handle Switch Signal	I	—
2	0.35	VT	3560	Passive Entry Driver Door Antenna Signal Hi	I	—
3	0.5	GY/WH	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
4	0.35	VT/GY	3561	Passive Entry Driver Door Antenna Signal Lo	I	—
5	0.5	BK	1150	Ground	I	—

B27P Door Handle Switch - Passenger Exterior (X88/Z88)





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13915624

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (NA)

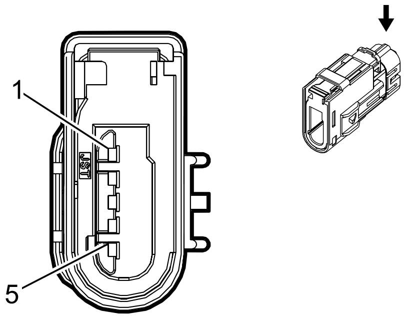
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

B27P Door Handle Switch - Passenger Exterior (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/WH	3571	Passenger Door Handle Switch Signal	I	—
2	0.35	GN/YE	3562	Passive Entry Passenger Door Antenna Signal Hi	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	GN/BK	3563	Passive Entry Passenger Door Antenna Signal Lo	I	—
5	0.5	BK	1250	Ground	I	—

B27P Door Handle Switch - Passenger Exterior (Z75)



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13934096

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (L-GY)

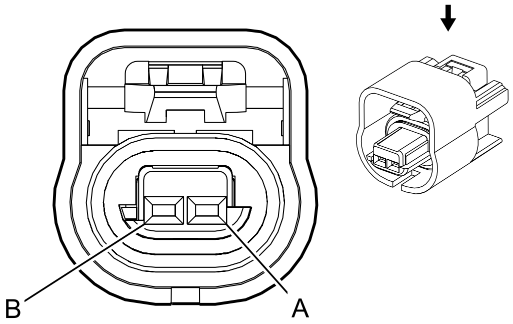
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

B27P Door Handle Switch - Passenger Exterior (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/WH	3571	Passenger Door Handle Switch Signal	I	—
2	0.35	GN/YE	3562	Passive Entry Passenger Door Antenna Signal Hi	I	—
3	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
4	0.35	GN/BK	3563	Passive Entry Passenger Door Antenna Signal Lo	I	—
5	0.5	BK	1250	Ground	I	—

B34 Engine Coolant Temperature Sensor ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 15355317

Service Connector: 19178093

Description: 2-Way F 150 GT Series, Sealed (BK)

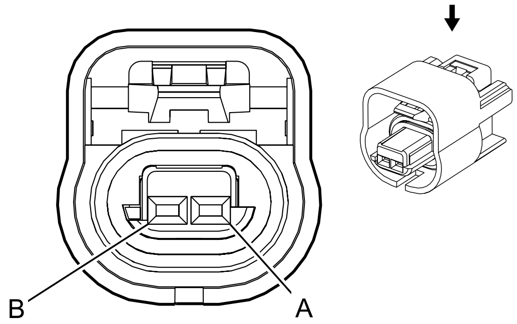
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B34 Engine Coolant Temperature Sensor ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
B	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—

B34 Engine Coolant Temperature Sensor (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 15355317

Service Connector: 19178093

Description: 2-Way F 150 GT Series, Sealed (BK)

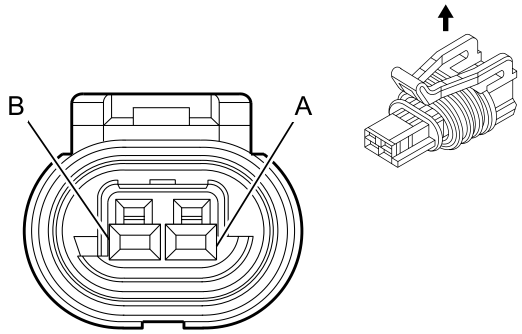
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B34 Engine Coolant Temperature Sensor (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
B	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—

B34 Engine Coolant Temperature Sensor (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 15449028

Service Connector: 88987993

Description: 2-Way F 150 GT Series, Sealed (BK)

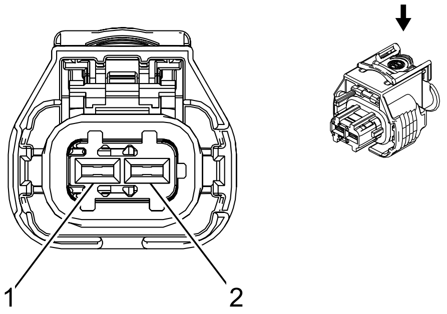
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B34 Engine Coolant Temperature Sensor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
B	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—

B35 Engine Oil Level Switch



Connector Part Information

Harness Type: Engine

OEM Connector: 13930085

Service Connector: 13384371

Description: 2-Way F 2.8 Series, Sealed (BK)

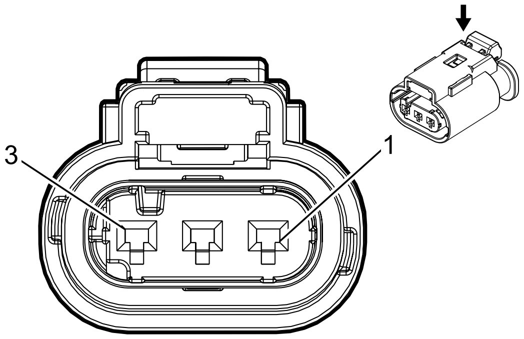
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B35 Engine Oil Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/WH	451	Signal Ground	I	—
2	0.5	BN/GN	1174	Oil Level Switch Signal	I	—

B37B Engine Oil Pressure Sensor ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13889776

Service Connector: 19301717

Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

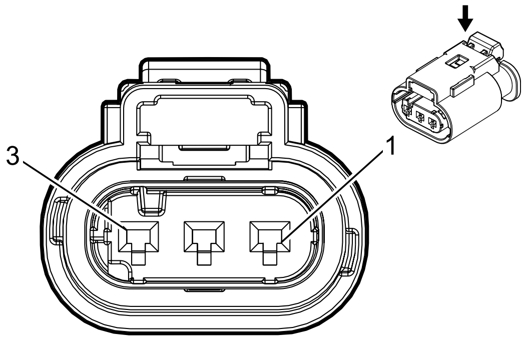
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B37B Engine Oil Pressure Sensor ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
3	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—

B37B Engine Oil Pressure Sensor (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13889776

Service Connector: 19301717

Description: 3-Way F 1.2 Multilock Series, Sealed (BK)

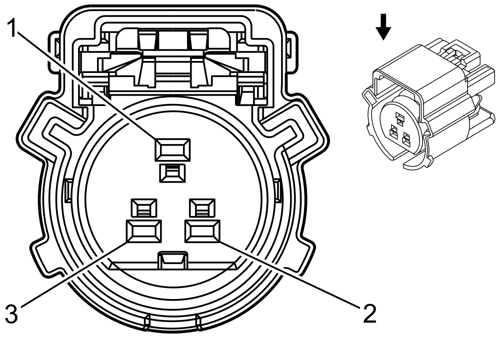
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B37B Engine Oil Pressure Sensor (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
3	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—

B37B Engine Oil Pressure Sensor (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 13589761

Service Connector: 13501882

Description: 3-Way F 150 GT Series, Sealed (BK)

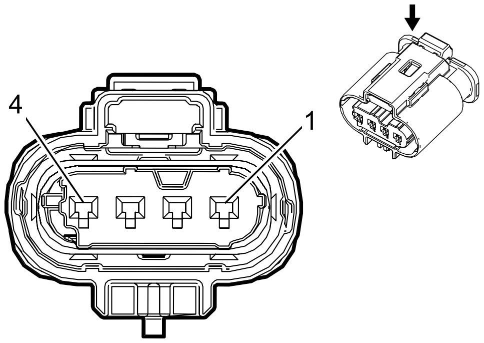
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B37B Engine Oil Pressure Sensor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—
3	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—

B52C Heated Oxygen Sensor - Bank 1 Sensor 1



Connector Part Information

Harness Type: Engine

OEM Connector: 13869004

Service Connector: 19301716

Description: 4-Way F 1.2 Multilock Series, Sealed (D-GY)

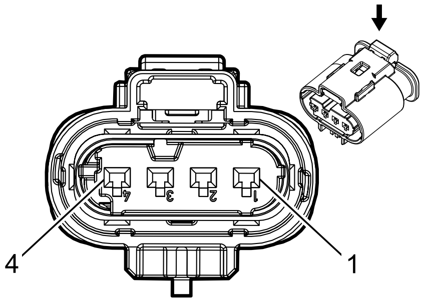
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52C Heated Oxygen Sensor - Bank 1 Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—

B52D Heated Oxygen Sensor - Bank 1 Sensor 2



Connector Part Information

Harness Type: Chassis

OEM Connector: 13815348

Service Connector: 13587298

Description: 4-Way F 1.2 Multilock Series, Sealed (L-GY)

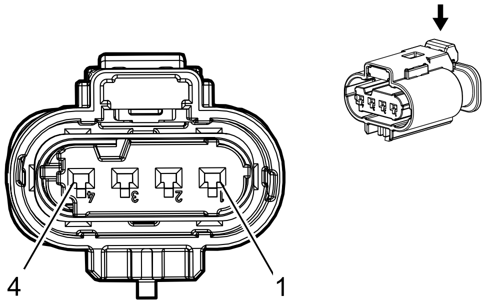
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52D Heated Oxygen Sensor - Bank 1 Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
3	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
4	0.5	VT	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 15532689

Service Connector: 19330904

Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

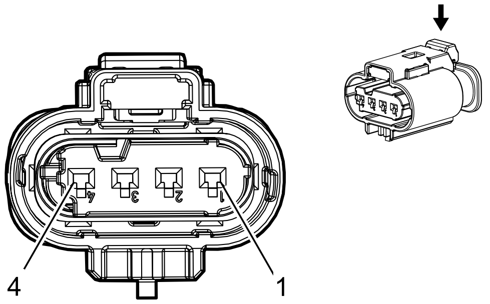
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 15532689

Service Connector: 19330904

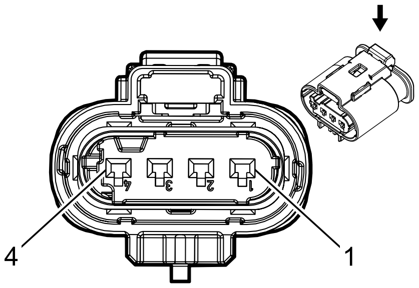
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
2	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—



Connector Part Information

Harness Type: Engine
OEM Connector: 13815341
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed (BK)

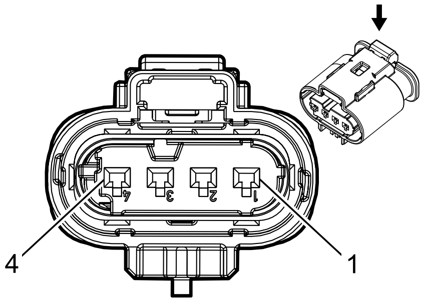
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
2	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
3	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—

B52F Heated Oxygen Sensor - Bank 2 Sensor 2



Connector Part Information

Harness Type: Engine

OEM Connector: 13815348

Service Connector: 13587298

Description: 4-Way F 1.2 Multilock Series, Sealed (L-GY)

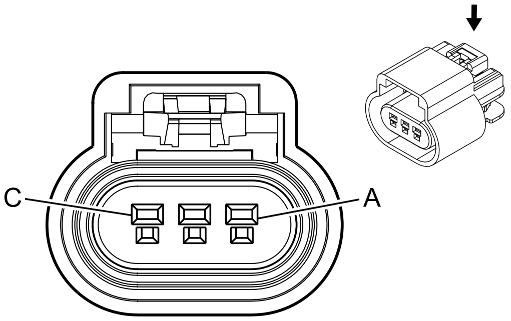
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B52F Heated Oxygen Sensor - Bank 2 Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
2	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
3	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
4	0.5	VT/GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—

B55 Engine Hood Switch



Connector Part Information

Harness Type: Forward Lamp
OEM Connector: 13519047
Service Connector: 13580871
Description: 3-Way F 150 GT Series, Sealed (BK)

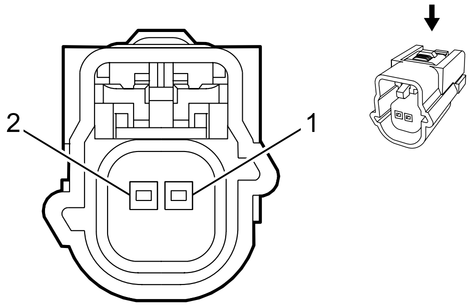
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B55 Engine Hood Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE	5530	Hood Open Switch Signal	I	—
B	0.5	BN/GN	109	Hood Ajar Switch Signal	I	—
C	1	BK	250	Ground	I	—

B59L Front Impact Sensor - Left



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13593078

Service Connector: 13577629

Description: 2-Way F 0.64 Series, Sealed (L-GY)

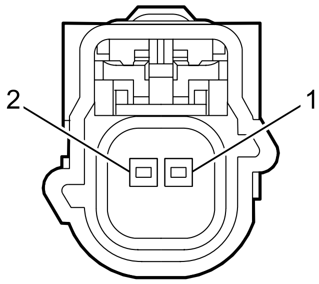
Terminal Part Information

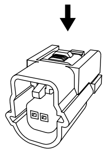
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B59L Front Impact Sensor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/YE	354	Left Front Discriminating Sensor Signal	I	—
2	0.5	BK/OG	5045	Left Front Discriminating Sensor Low Reference	I	—

B59R Front Impact Sensor - Right





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13593078

Service Connector: 13577629

Description: 2-Way F 0.64 Series, Sealed (L-GY)

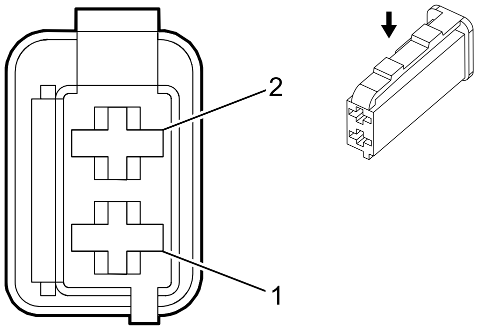
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B59R Front Impact Sensor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GN	1409	Right Front Discriminating Sensor Signal	I	—
2	0.5	BK/OG	5600	Right Front Discriminating Sensor Low Reference	I	—

B61P Seat Belt Tension Sensor - Passenger



Connector Part Information

Harness Type: Body

OEM Connector: 13670097

Service Connector: 13580951

Description: 2-Way F 1.6 Timer Series (BK)

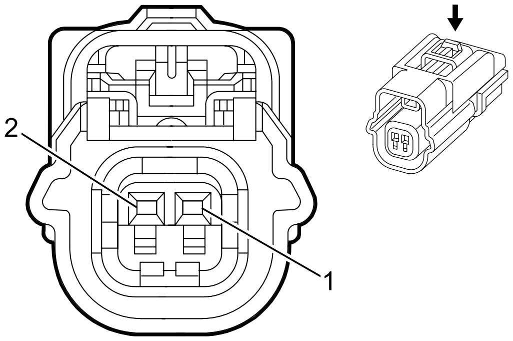
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B61P Seat Belt Tension Sensor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/RD	5612	Passenger Seat Belt Tension Sensor 5V Reference	I	—
2	0.35	VT/OG	5611	Passenger Seat Belt Tension Sensor Signal	I	—

B62D Seat Position Sensor - Driver



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 54390239

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series, Sealed (BK)

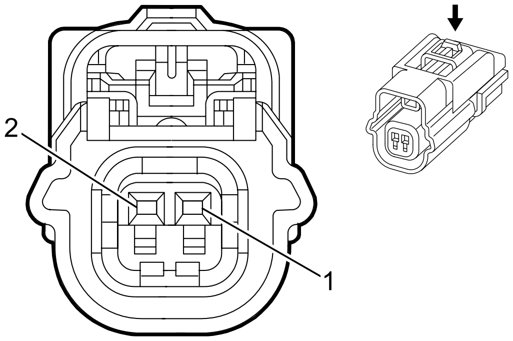
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B62D Seat Position Sensor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1363	Driver Seat Belt Switch Low Reference	I	—
2	0.35	OG/GN	5055	Driver Seat Position Switch Signal	I	—

B62P Seat Position Sensor - Passenger



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 54390239

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series, Sealed (BK)

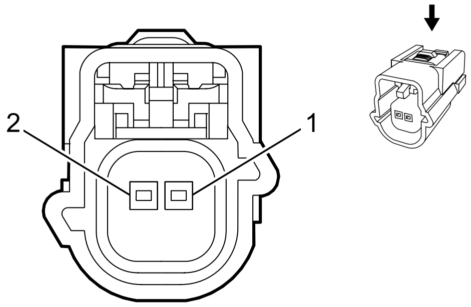
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B62P Seat Position Sensor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1361	Passenger Seat Belt Switch Low Reference	I	—
2	0.35	OG/BU	5056	Passenger Seat Position Switch Signal	I	—

B63LF Side Impact Sensor - Left Front



Connector Part Information

Harness Type: Driver Door

OEM Connector: 13593078

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (L-GY)

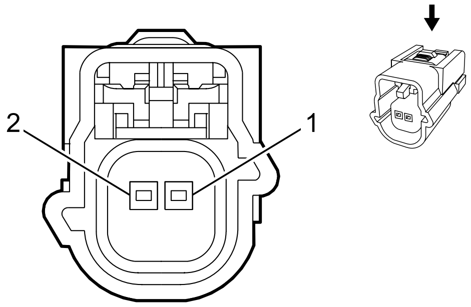
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B63LF Side Impact Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GN	2132	Left Front Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6628	Left Front Side Impact Sensing Module Low Reference	I	—

B63LR Side Impact Sensor - Left Rear



Connector Part Information

Harness Type: Body

OEM Connector: 13610095

Service Connector: 13585852

Description: 2-Way F 0.64 Series, Sealed (D-GY)

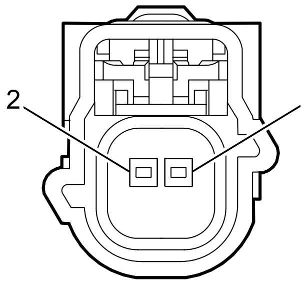
Terminal Part Information

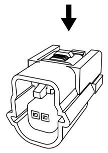
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B63LR Side Impact Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/D-BU	6620	Left Middle Side Impact Sensing Module Signal	I	—
2	0.35	BK/OG	6621	Left Middle Side Impact Sensing Module Low Reference	I	—

B63RF Side Impact Sensor - Right Front





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13593078

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (L-GY)

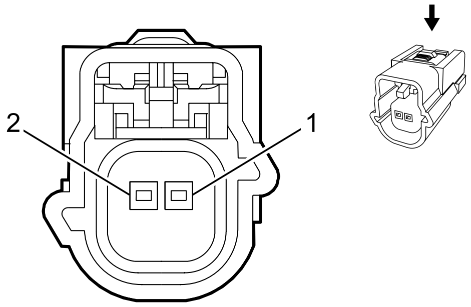
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B63RF Side Impact Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GN	2134	Right Front Side Impact Sensing Module Signal	I	—
2	0.5	BK/OG	6629	Right Front Side Impact Sensing Module Low Reference	I	—

B63RR Side Impact Sensor - Right Rear



Connector Part Information

Harness Type: Body
OEM Connector: 13610095
Service Connector: 13585852
Description: 2-Way F 0.64 Series, Sealed (D-GY)

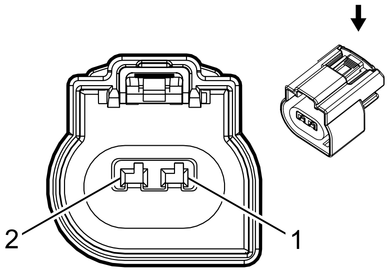
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B63RR Side Impact Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/VT	6624	Right Middle Side Impact Sensing Module Signal	I	—
2	0.35	BK/OG	6625	Right Middle Side Impact Sensing Module Low Reference	I	—

B68A Knock Sensor 1 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13814755

Service Connector: 19301207

Description: 2-Way F 150 MX Series, Sealed (BK)

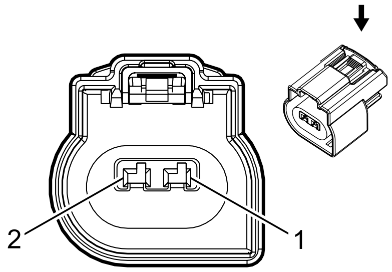
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68A Knock Sensor 1 ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
2	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—

B68A Knock Sensor 1 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13814755

Service Connector: 19301207

Description: 2-Way F 150 MX Series, Sealed (BK)

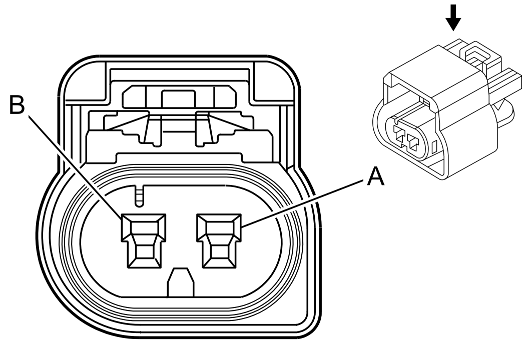
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68A Knock Sensor 1 (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
2	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—

B68A Knock Sensor 1 (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 15374222

Service Connector: 13580877

Description: 2-Way F 150 GT Series, Sealed (NA)

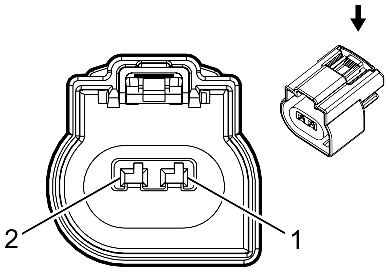
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68A Knock Sensor 1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
B	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—

B68B Knock Sensor 2 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13814755

Service Connector: 19301207

Description: 2-Way F 150 MX Series, Sealed (BK)

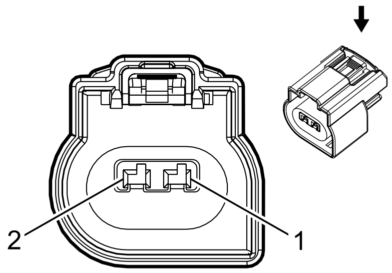
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68B Knock Sensor 2 ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
2	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—

B68B Knock Sensor 2 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13814755

Service Connector: 19301207

Description: 2-Way F 150 MX Series, Sealed (BK)

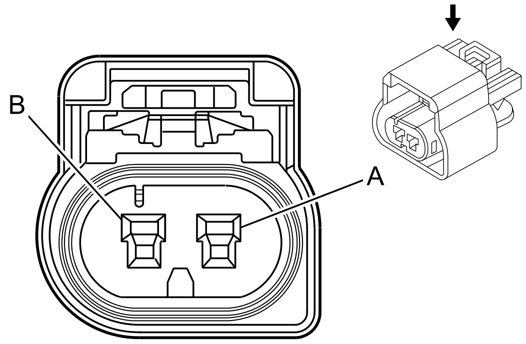
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68B Knock Sensor 2 (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
2	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—

B68B Knock Sensor 2 (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 15374222

Service Connector: 13580877

Description: 2-Way F 150 GT Series, Sealed (NA)

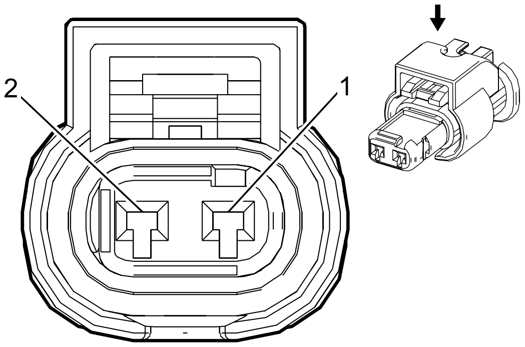
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B68B Knock Sensor 2 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
B	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—

B70 Liftgate Close Switch



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13761652

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

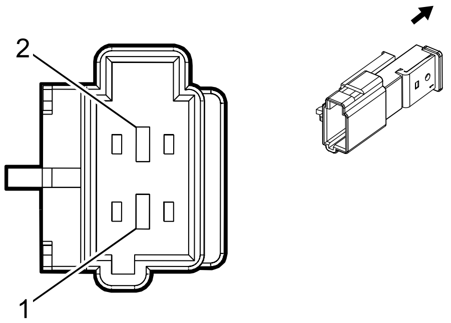
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B70 Liftgate Close Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/RD	3033	Lift Gate Shut Face Switch Signal	I	—
2	0.35	BK/VT	5801	Lift Gate Object Sensor Low Reference	I	—

B71L Liftgate Object Sensor - Left



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13662506

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.6 Timer Series (BK)

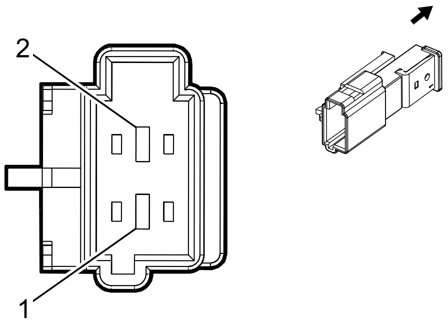
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B71L Liftgate Object Sensor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/BK	6126	Lift Gate Object Sensor 2 Signal	I	—
2	0.35	GY/BK	5802	Lift Gate Object Sensor Signal	I	—

B71R Liftgate Object Sensor - Right



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13662506

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.6 Timer Series (BK)

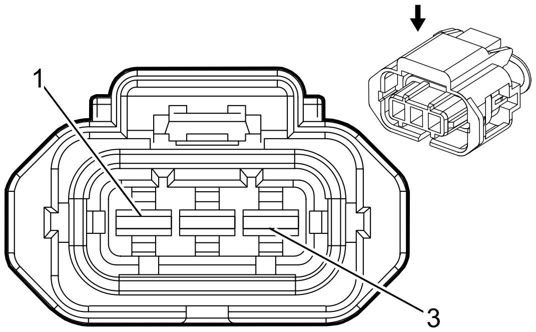
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B71R Liftgate Object Sensor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BK	5802	Lift Gate Object Sensor Signal	I	—
2	0.35	BK/VT	5801	Lift Gate Object Sensor Low Reference	I	—

B74 Manifold Absolute Pressure Sensor ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 15397338

Service Connector: 13585845

Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

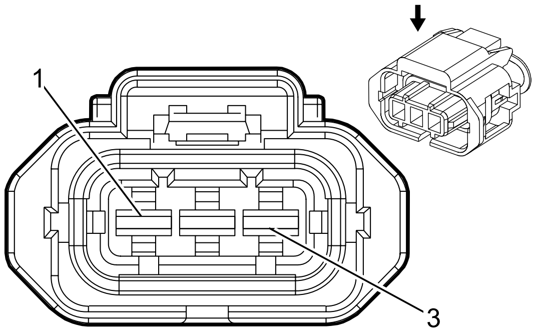
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B74 Manifold Absolute Pressure Sensor ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B74 Manifold Absolute Pressure Sensor (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 15397338

Service Connector: 13585845

Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

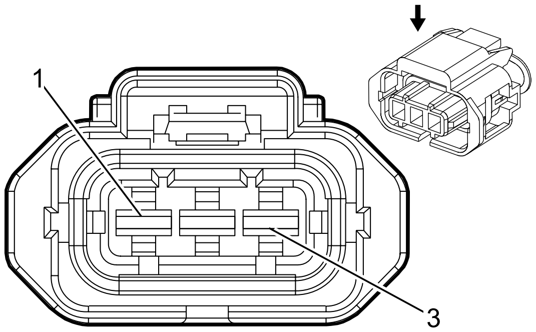
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B74 Manifold Absolute Pressure Sensor (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B74 Manifold Absolute Pressure Sensor (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 13639747

Service Connector: 19181248

Description: 3-Way F 2.8 Junior Power Timer Series, Sealed (BK)

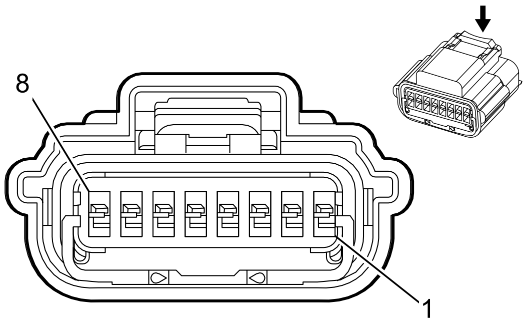
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B74 Manifold Absolute Pressure Sensor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B75C Multifunction Intake Air Sensor



Connector Part Information

Harness Type: Engine

OEM Connector: 13774439

Service Connector: 13583440

Description: 8-Way F 0.64 Series, Sealed (BK)

Terminal Part Information

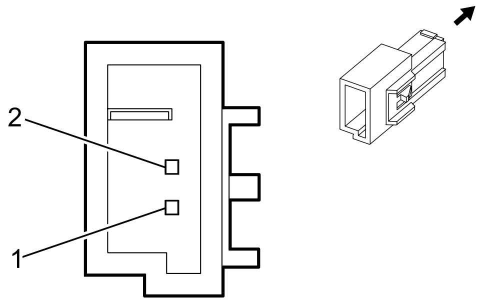
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B75C Multifunction Intake Air Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
2	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
3	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	I	L83/L86/L8B
	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	L96
4	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
5	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
6	0.5	GN/WH	492	Mass Air Flow Sensor Signal	I	—
7	0.75	BK/WH	451	Signal Ground	I	—

8	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—

B77LF Radio Volume Compensator Interior Noise Microphone - Left Front



Connector Part Information

Harness Type: Headliner

OEM Connector: 13676029

Service Connector: 19260825

Description: 2-Way M 0.64 Series (BK)

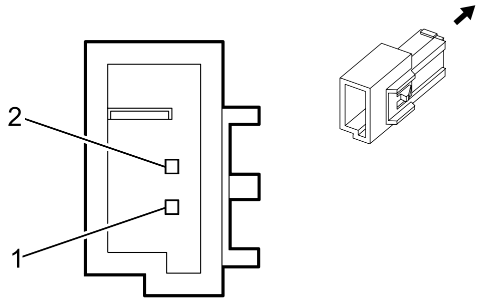
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77LF Radio Volume Compensator Interior Noise Microphone - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/BK	3008	Noise Reduction Microphone 1 Low Reference	I	—
2	0.35	GN/WH	3005	Noise Reduction Microphone 1 Signal	I	—

B77R Radio Volume Compensator Interior Noise Microphone - Rear



Connector Part Information

Harness Type: Headliner

OEM Connector: 13676029

Service Connector: 19260825

Description: 2-Way M 0.64 Series (BK)

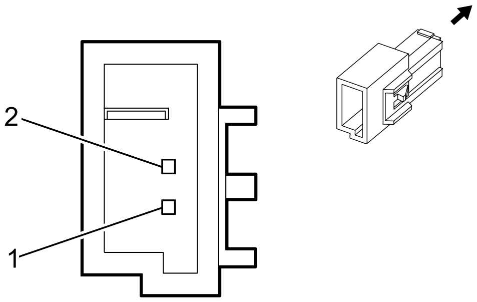
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77R Radio Volume Compensator Interior Noise Microphone - Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BN	3010	Noise Reduction Microphone 3 Low Reference	I	—
2	0.35	GY/D-BU	3007	Noise Reduction Microphone 3 Signal	I	—

B77RF Radio Volume Compensator Interior Noise Microphone - Right Front



Connector Part Information

Harness Type: Headliner

OEM Connector: 13676029

Service Connector: 19260825

Description: 2-Way M 0.64 Series (BK)

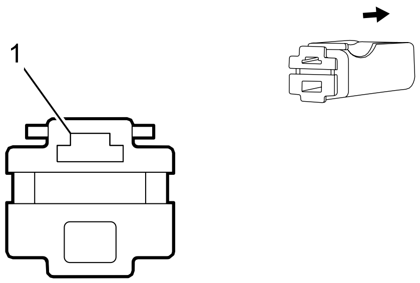
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B77RF Radio Volume Compensator Interior Noise Microphone - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BK	3009	Noise Reduction Microphone 2 Low Reference	I	—
2	0.35	D-BU/YE	3006	Noise Reduction Microphone 2 Signal	I	—

B80 Park Brake Switch



Connector Part Information

Harness Type: Body

OEM Connector: 13511619

Service Connector: 88988465

Description: 1-Way F 250 Series (BK)

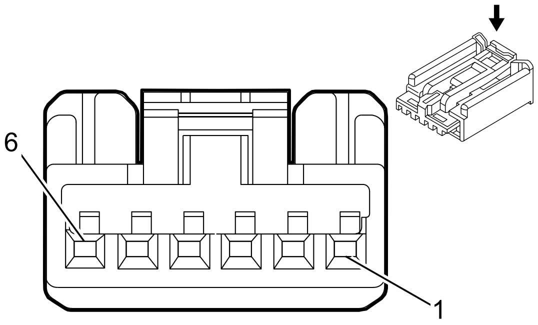
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B80 Park Brake Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/VT	1134	Park Brake Switch Signal	I	—

B81B Park Position Switch



Connector Part Information

Harness Type: —

OEM Connector: 15269798

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

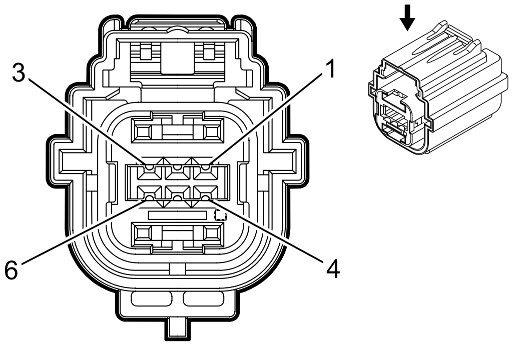
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

B81B Park Position Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 6	—	—	—	Not Occupied	—	—
A	0.35	GN/WH	1932	Shift Select Switch Park Signal	I	—
B	—	BK	1850	Ground	I	—

B87 Rearview Camera X1 (UVC)



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13629704

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Series, Sealed (GY)

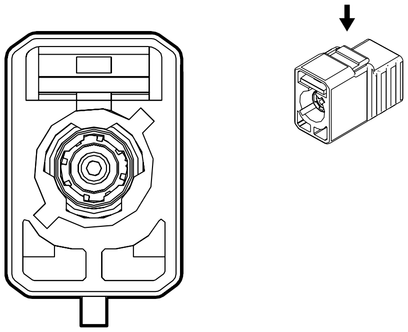
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B87 Rearview Camera X1 (UVC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/YE	6972	Camera Signal 2 +	I	—
2	0.5	D-BU/YE	6974	Camera Low Reference	I	—
3	0.35	GN/WH	24	Backup Lamp Control	I	—
4	0.35	WH/D-BU	6973	Camera Signal 2	I	—
5	0.35	BK	2550	Ground	I	—
6	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—

B87 Rearview Camera X2 (DRZ)



Connector Part Information

Harness Type: —

OEM Connector: Not Available

Service Connector: Service by Cable Assembly - See Part Catalog

Description: 1-Way F Coax Type (BU)

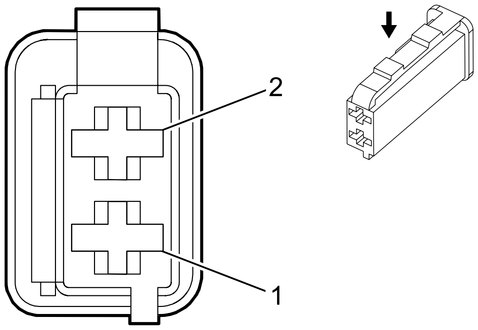
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	—	—	—	—
II	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

B87 Rearview Camera X2 (DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
C	0.35	—	6208	Coaxial Camera Signal	I	—
COAX	—	—	—	Not Occupied	—	—
S	0.35	—	6209	Coaxial Camera Low Reference	II	—

B88D Seat Belt Switch - Driver



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 1563189-1

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

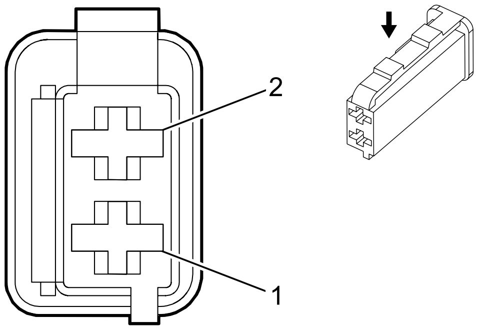
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B88D Seat Belt Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1363	Driver Seat Belt Switch Low Reference	I	—
2	0.35	OG/BN	238	Driver Seat Belt Switch Signal	I	—

B88P Seat Belt Switch - Passenger



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 1563189-1

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

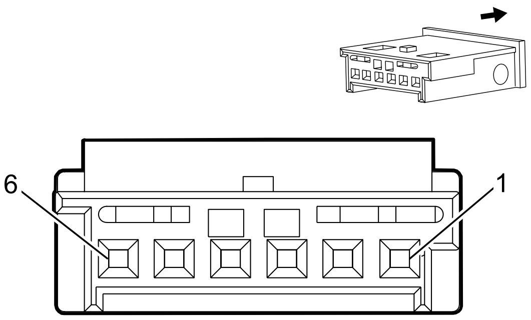
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B88P Seat Belt Switch - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/OG	1361	Passenger Seat Belt Switch Low Reference	I	—
2	0.35	OG/VT	1362	Passenger Seat Belt Switch Signal	I	—

B99 Steering Wheel Angle Sensor



Connector Part Information

Harness Type: —

OEM Connector: 19151551

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

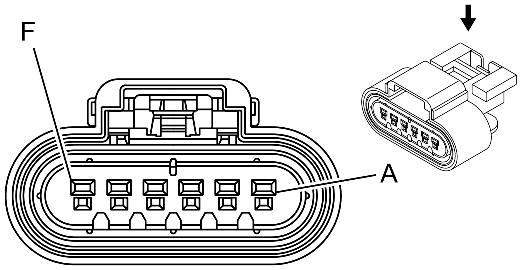
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

B99 Steering Wheel Angle Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
2	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
3	0.5	BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
4	0.5	BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
5	0.35	GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	I	—
6	0.35	BK/WH	1851	Signal Ground	I	—

B107 Accelerator Pedal Position Sensor



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 15326830

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 150 GT Series, Sealed (BK)

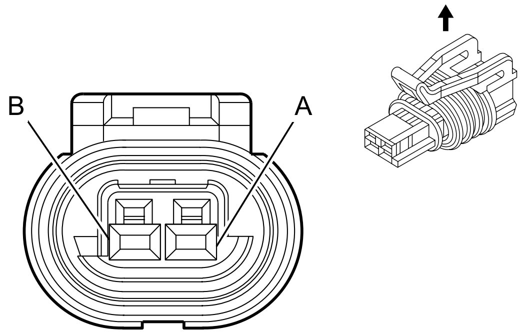
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B107 Accelerator Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
B	0.35	GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
C	0.35	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
D	0.35	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
E	0.35	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
F	0.35	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—

B115 Vehicle Speed Sensor



Connector Part Information

Harness Type: —

OEM Connector: 89046954

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series, Sealed (BK)

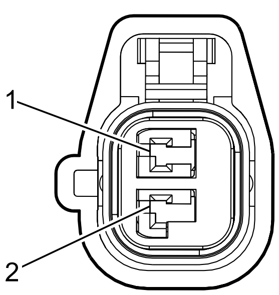
Terminal Part Information

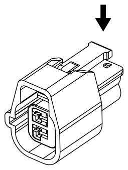
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

B115 Vehicle Speed Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
B	0.5	BK/BN	822	Vehicle Speed Sensor Low Reference	I	—

B118B Windshield Washer Fluid Level Switch





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33113086

Service Connector: 13593220

Description: 2-Way F 1.5 Series (L-GY)

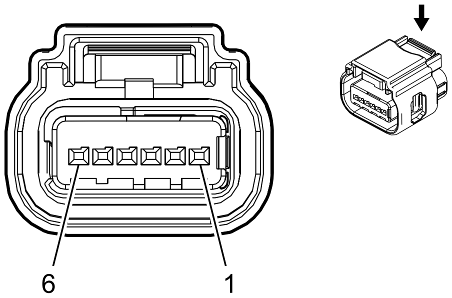
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B118B Windshield Washer Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	185	Low Washer Fluid Indicator Control	I	—
2	0.75	BK	150	Ground	I	—

B119 Multi-axis Acceleration Sensor



Connector Part Information

Harness Type: Body

OEM Connector: 13834428

Service Connector: 19299684

Description: 6-Way F 0.64 Series, Sealed (BK)

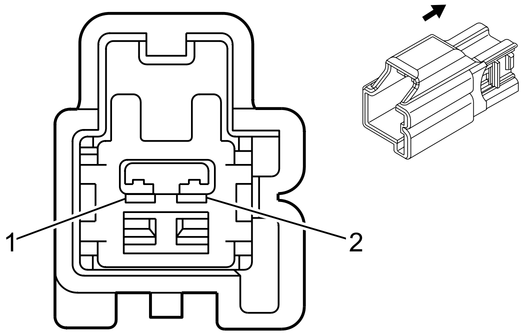
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B119 Multi-axis Acceleration Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
2	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
3	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
4	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
5	0.35	BK/BN	6045	Steering Angle Sensor Low Reference	I	—
6	0.5	BK/WH	2751	Signal Ground	I	—

B124LR Folding Seat Back Position Switch - 2nd Row Left



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 13580902

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 Series (L-GY)

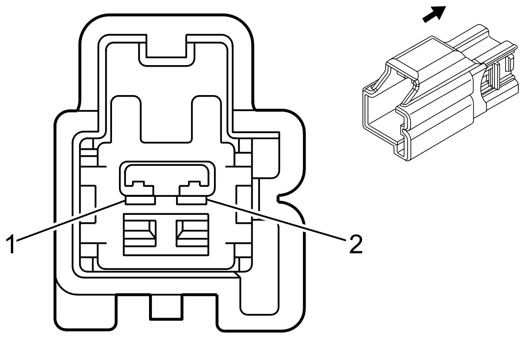
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B124LR Folding Seat Back Position Switch - 2nd Row Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1150	Ground	I	—
2	0.75	GY	1150	Ground	I	—

B124RR Folding Seat Back Position Switch - 2nd Row Right



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 13580902

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 Series (L-GY)

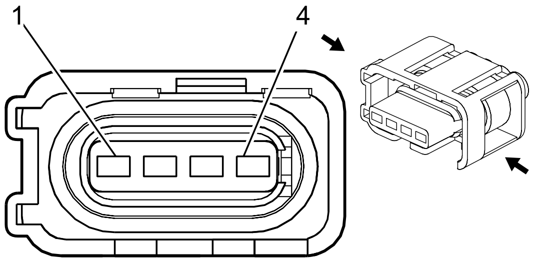
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B124RR Folding Seat Back Position Switch - 2nd Row Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1250	Ground	I	—
2	0.75	GY	1250	Ground	I	—

B127 Liftgate Window Ajar Switch



Connector Part Information

Harness Type: Liftgate

OEM Connector: 15489983

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F Micro-Pack Timer III Series, Sealed (NA)

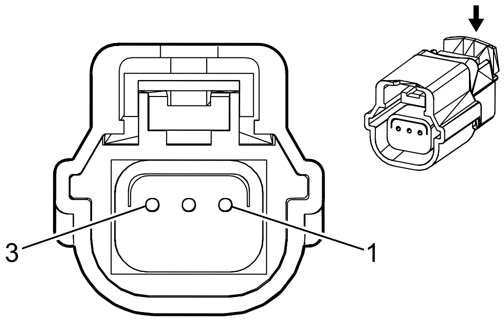
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B127 Liftgate Window Ajar Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/YE	6795	Lift Glass/Rear Compartment Lid Motor Release Control 2	I	—
2	0.5	BK	1450	Ground	I	—
3	0.5	BK	1450	Ground	I	—
4	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal 1	I	—

B133 Brake Booster Fluid Flow Alarm Switch



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

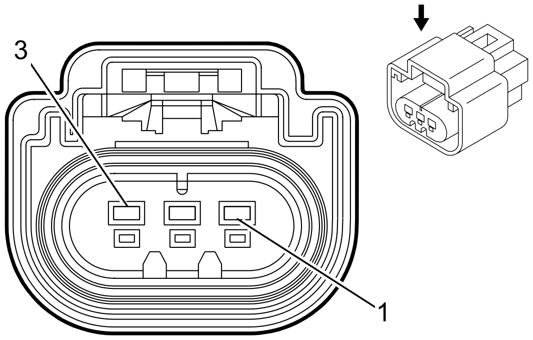
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B133 Brake Booster Fluid Flow Alarm Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	GY	3154	Left Front Supplemental Object Sensor Signal	I	—
	0.5	GN	3155	Right Front Supplemental Object Sensor Signal	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B150 Fuel Tank Pressure Sensor



Connector Part Information

Harness Type: Chassis

OEM Connector: 13511996

Service Connector: 13580873

Description: 3-Way F 150 GT Series, Sealed (GY)

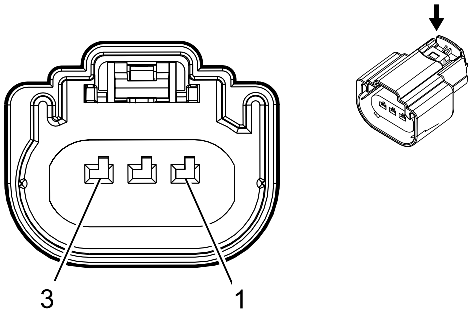
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B150 Fuel Tank Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	I	—
2	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
3	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—

B152LF Suspension Position Sensor - Left Front



Connector Part Information

Harness Type: Chassis

OEM Connector: 13873527

Service Connector: 19300594

Description: 3-Way F 1.5 Series, Sealed (GY)

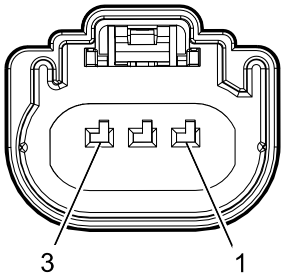
Terminal Part Information

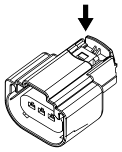
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B152LF Suspension Position Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/RD	1205	Left Front Strut Position Sensor 5V Reference	I	—
2	0.5	BK/D-BU	1206	Left Front Strut Position Sensor Low Reference	I	—
3	0.5	BN/WH	1207	Left Front Strut Position Sensor Signal	I	—

B152LR Suspension Position Sensor - Left Rear





Connector Part Information

Harness Type: Chassis

OEM Connector: 13873527

Service Connector: 19300594

Description: 3-Way F 1.5 Series, Sealed (GY)

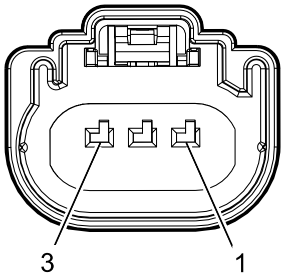
Terminal Part Information

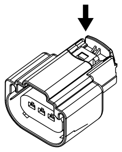
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B152LR Suspension Position Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/RD	1208	Left Rear Strut Position Sensor 5V Reference	I	—
2	0.5	BK/GN	1209	Left Rear Strut Position Sensor Low Reference	I	—
3	0.5	GN/WH	1210	Left Rear Strut Position Sensor Signal	I	—

B152RF Suspension Position Sensor - Right Front





Connector Part Information

Harness Type: Chassis

OEM Connector: 13873527

Service Connector: 19300594

Description: 3-Way F 1.5 Series, Sealed (GY)

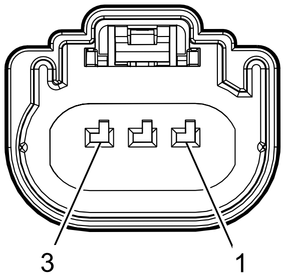
Terminal Part Information

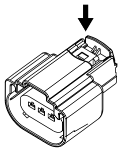
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B152RF Suspension Position Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/RD	1211	Right Front Strut Position Sensor 5V Reference	I	—
2	0.5	BK/GY	1212	Right Front Strut Position Sensor Low Reference	I	—
3	0.5	YE/WH	1213	Right Front Strut Position Sensor Signal	I	—

B152RR Suspension Position Sensor - Right Rear





Connector Part Information

Harness Type: Chassis

OEM Connector: 13873527

Service Connector: 19300594

Description: 3-Way F 1.5 Series, Sealed (GY)

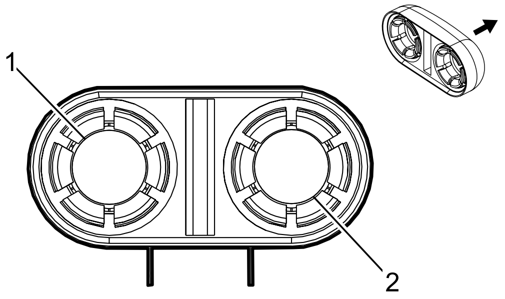
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B152RR Suspension Position Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/RD	1214	Right Rear Strut Position Sensor 5V Reference	I	—
2	0.5	BK/YE	1215	Right Rear Strut Position Sensor Low Reference	I	—
3	0.5	GN/GY	1216	Right Rear Strut Position Sensor Signal	I	—

B159L Glass Breakage Sensor - Left (UTV+SWB)



Connector Part Information

Harness Type: Body

OEM Connector: 3332-3TE-17

Service Connector: Pending

Description: 2-Way F Snap Type (BK)

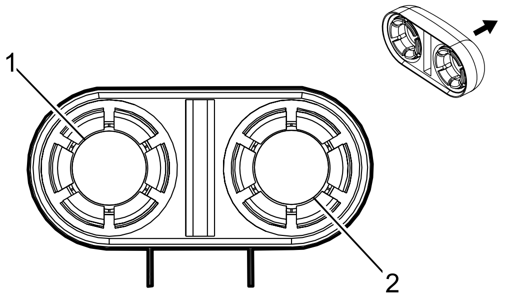
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B159L Glass Breakage Sensor - Left (UTV+SWB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	293	Rear Defog Element Control	I	—
2	0.5	BU/VT	7597	Glass Breakage Sensor Signal	I	—

B159L Glass Breakage Sensor - Left (UTV-SWB)



Connector Part Information

Harness Type: Body

OEM Connector: 3332-3TE-17

Service Connector: Pending

Description: 2-Way F Snap Type (BK)

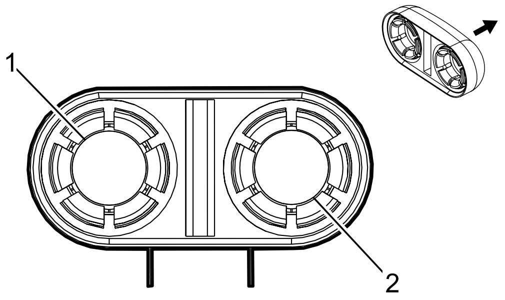
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B159L Glass Breakage Sensor - Left (UTV-SWB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	293	Rear Defog Element Control	I	—
2	0.5	BU/VT	7597	Glass Breakage Sensor Signal	I	—

B159R Glass Breakage Sensor - Right (UTT/UTV+SWB)



Connector Part Information

Harness Type: Body

OEM Connector: 3332-3TE-17

Service Connector: Pending

Description: 2-Way F Snap Type (BK)

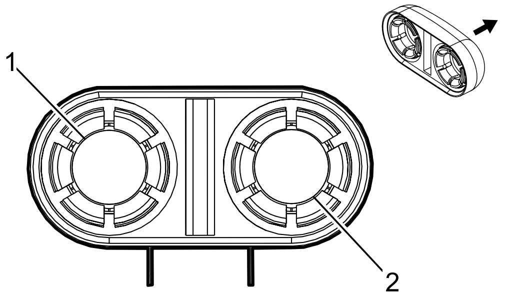
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B159R Glass Breakage Sensor - Right (UTT/UTV+SWB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU/VT	7597	Glass Breakage Sensor Signal	I	—
2	0.5	VT/BU	7598	Glass Breakage Sensor Signal 2	I	—

B159R Glass Breakage Sensor - Right (UTV-SWB)



Connector Part Information

Harness Type: Body

OEM Connector: 3332-3TE-17

Service Connector: Pending

Description: 2-Way F Snap Type (BK)

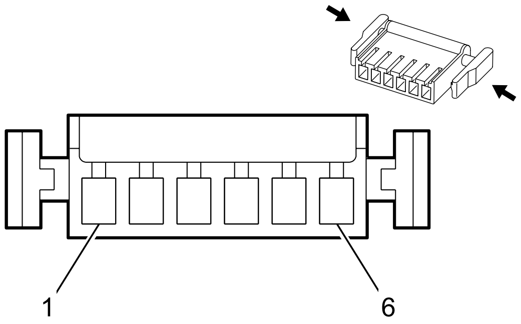
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B159R Glass Breakage Sensor - Right (UTV-SWB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU/VT	7597	Glass Breakage Sensor Signal	I	—
2	0.5	VT/BU	7598	Glass Breakage Sensor Signal 2	I	—

B165 Content Theft Deterrent Sensor Module



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13726957

Service Connector: 13576539

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

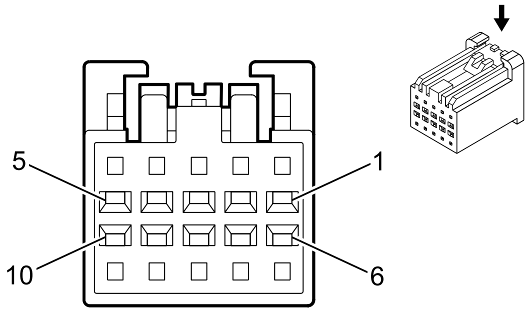
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B165 Content Theft Deterrent Sensor Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/BK	5068	Intrusion Sensor Switch Disable Signal	I	—
2	0.35	YE/D-BU	3278	Intrusion Sensor Switch LED Control	I	—
3	0.35	RD/D-BU	4540	Battery Positive Voltage	I	—
4	0.5	GN/BN	6132	Local Interconnect Network Serial Data Bus 1	I	—
5	0.35	BK	1050	Ground	I	—
6	—	—	—	Not Occupied	—	—

B174W Frontview Camera - Windshield



Connector Part Information

Harness Type: Headliner

OEM Connector: 13876499

Service Connector: 13581139

Description: 10-Way F 0.64 Kaizen Series (GY)

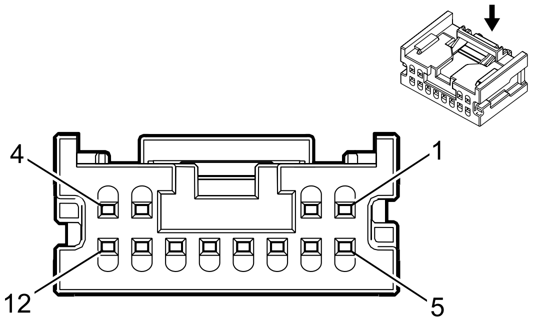
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

B174W Frontview Camera - Windshield

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	RD/GN	3140	Battery Positive Voltage	I	—
3	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
4	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
5	0.5	BK	1050	Ground	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
9	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
10	0.35	GY/VT	3808	Front Object Sensor Control 2	I	—

B174 Frontview Camera (UHX)



Connector Part Information

Harness Type: Headliner

OEM Connector: 33235297

Service Connector: 19353780

Description: 12-Way F Mini 50 Series (BK)

Terminal Part Information

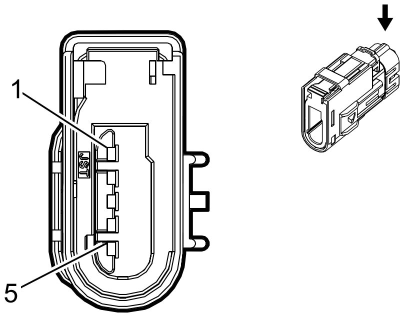
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579954	No Tool Required	J-38125-553	Not Available	Not Available	Not Available	Not Available

B174 Frontview Camera (UHX)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	RD/GN	3140	Battery Positive Voltage	I	—
4	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
5	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
6	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
7	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
8	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—

9	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
10	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—
11	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
12	—	—	—	Not Occupied	—	—

B174 Frontview Camera (UVH)



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13934096

Service Connector: Service by Harness - See Part Catalog

Description: 5-Way M 1.2 Series, Sealed (L-GY)

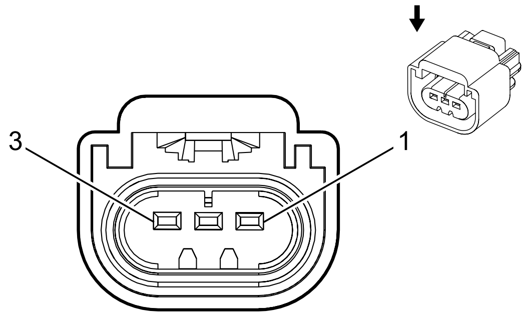
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B174 Frontview Camera (UVH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	3373	Auxiliary Video High Signal 2	I	—
2	0.35	BK	3371	Video Low Reference 2	I	—
3	0.35	GY	3372	Auxiliary Video Low Signal 2	I	—
4	0.35	BK/WH	2551	Signal Ground	I	—
5	0.35	WH/BN	6201	Camera Control	I	—

B198 Fuel Composition Sensor



Connector Part Information

Harness Type: Chassis

OEM Connector: 13511132

Service Connector: 19301582

Description: 3-Way F 150 GT Series, Sealed (BN)

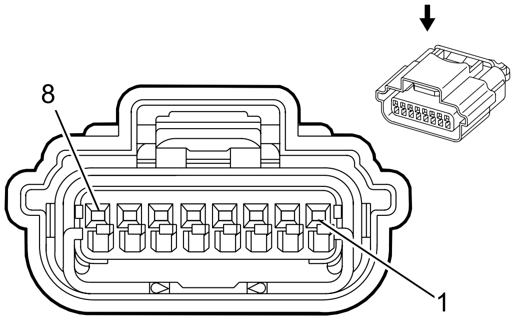
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B198 Fuel Composition Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	5294	Powertrain Main Relay Fused Supply 5	I	—
2	0.5	BK	2150	Ground	I	—
3	0.5	WH	1579	Fuel Temperature/Composition Signal	I	—

B218L Side Object Sensor Module - Left



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 15539250

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series, Sealed (BK)

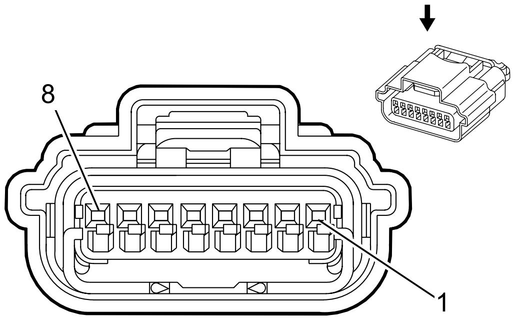
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B218L Side Object Sensor Module - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN	5060	Low Speed GMLAN Serial Data	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	D-BU/WH	3812	High Speed GMLAN Serial Data (+) 5	I	—
5	0.5	D-BU/YE	3810	High Speed GMLAN Serial Data (-) 5	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	BK	1450	Ground	I	—
8	0.5	RD/GN	3140	Battery Positive Voltage	I	—

B218R Side Object Sensor Module - Right



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 15539251

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series, Sealed (BK)

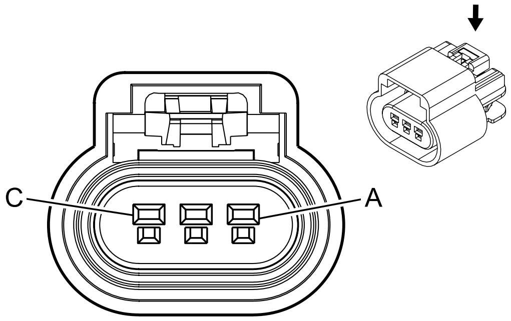
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B218R Side Object Sensor Module - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	5861	Passenger Side Object Detection LED Signal 1	I	—
2	0.5	GY/YE	5853	Driver Side Object Detection LED Signal 1	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	D-BU/WH	3812	High Speed GMLAN Serial Data (+) 5	I	—
5	0.5	D-BU/YE	3810	High Speed GMLAN Serial Data (-) 5	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	BK	1450	Ground	I	—
8	0.5	RD/GN	3140	Battery Positive Voltage	I	—

B227 Gear Position Sensor



Connector Part Information

Harness Type: Engine

OEM Connector: 15326808

Service Connector: 13580871

Description: 3-Way F 150 GT Series, Sealed (BK)

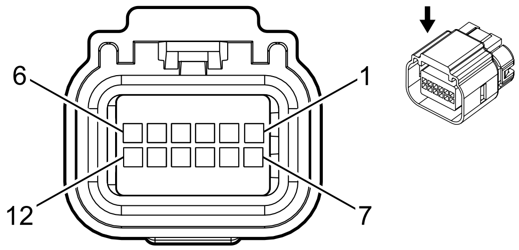
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B227 Gear Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/BK	7478	Rotary Position Sensor Low Reference	I	—
B	0.5	WH/RD	7477	Rotary Position Sensor 5V Reference	I	—
C	0.5	WH/GN	7479	Rotary Position Sensor Signal	I	—

B233B Radar Sensor Module - Long Range



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13833301

Service Connector: 19299773

Description: 12-Way F 1.5 Series, Sealed (BK)

Terminal Part Information

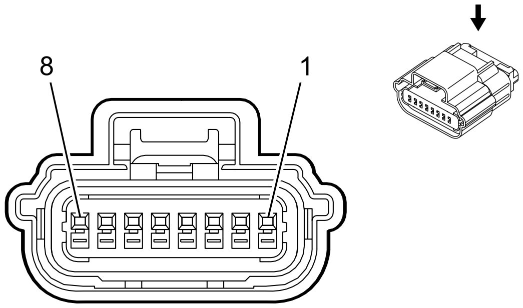
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

B233B Radar Sensor Module - Long Range

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
3	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
4	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
5	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
6	0.5	GY/VT	3808	Front Object Sensor Control 2	I	—
7	0.5	BK	250	Ground	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—

11	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
12	—	—	—	Not Occupied	—	—

B233LF Radar Sensor Module - Short Range Left Front



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13916067

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series, Sealed (BK)

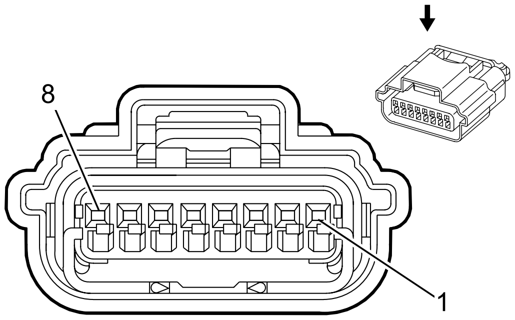
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B233LF Radar Sensor Module - Short Range Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
2	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	250	Ground	I	—
5	0.5	GY/VT	3808	Front Object Sensor Control 2	I	—
6	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
7	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
8	0.5	BK	250	Ground	I	—

B233LR Radar Sensor Module - Short Range Left Rear



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13912371

Service Connector: Service by Harness - See Part Catalog

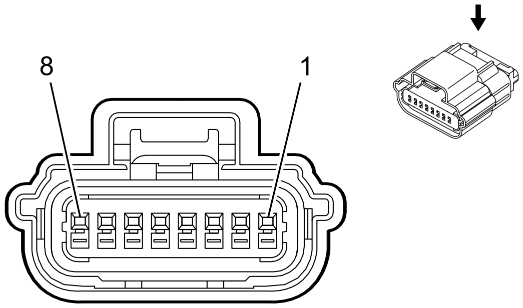
Description: 8-Way F 0.64 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B233LR Radar Sensor Module - Short Range Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
2	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	BN/VT	3809	Front Object Sensor Control 1	I	—
6	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
7	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
8	0.5	BK	1450	Ground	I	—



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13912372

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series, Sealed (BK)

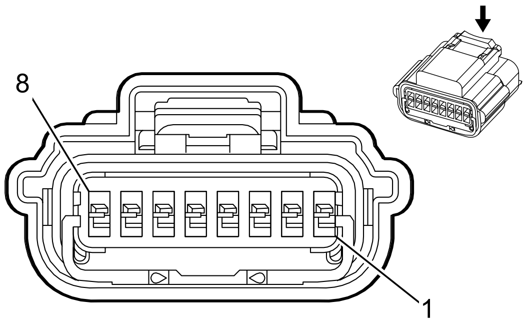
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B233RF Radar Sensor Module - Short Range Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
2	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
3	0.5	BK	250	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GY/VT	3808	Front Object Sensor Control 2	I	—
6	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
7	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
8	0.5	BK	250	Ground	I	—

B233RR Radar Sensor Module - Short Range Right Rear



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13774439

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series, Sealed (BK)

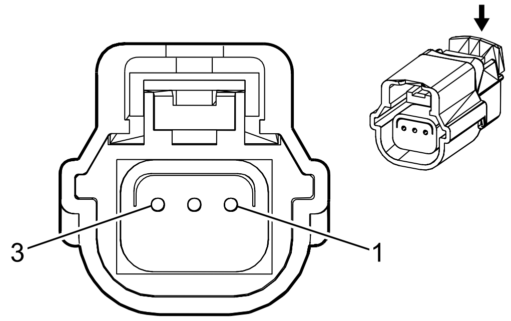
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B233RR Radar Sensor Module - Short Range Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
2	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
3	0.5	BK	1450	Ground	I	—
4	0.5	BK	1450	Ground	I	—
5	0.5	BN/VT	3809	Front Object Sensor Control 1	I	—
6	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
7	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
8	0.5	BK	1450	Ground	I	—

B306A Parking Assist Sensor - Front Left Outer



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

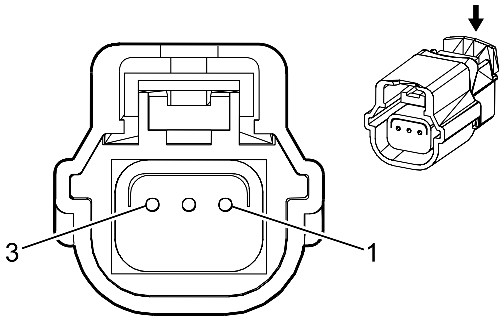
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306A Parking Assist Sensor - Front Left Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	VT/WH	5215	Front Parking Left Corner Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306B Parking Assist Sensor - Front Left Middle



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

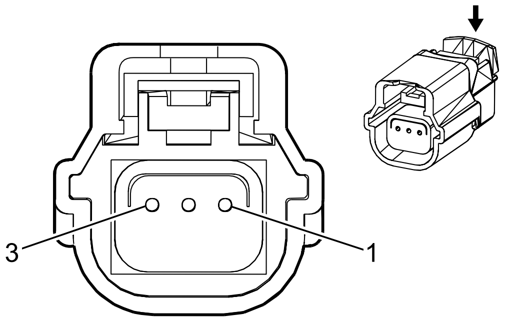
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306B Parking Assist Sensor - Front Left Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	YE/GY	5216	Front Parking Left Mid Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306C Parking Assist Sensor - Front Right Middle



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

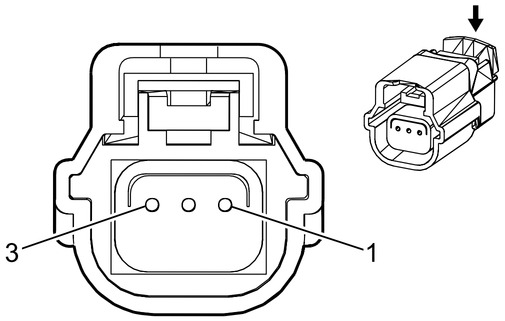
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306C Parking Assist Sensor - Front Right Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	VT/GY	5218	Front Parking Right Mid Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306D Parking Assist Sensor - Front Right Outer



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

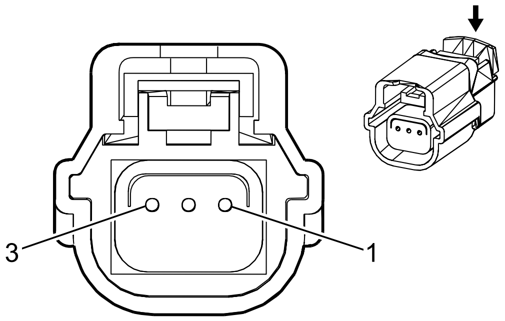
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306D Parking Assist Sensor - Front Right Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	WH/GY	5217	Front Parking Right Corner Sensor	I	—
3	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—

B306E Parking Assist Sensor - Rear Left Outer



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

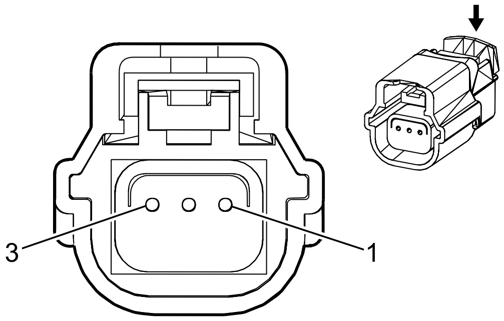
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306E Parking Assist Sensor - Rear Left Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE	2375	Left Rear Corner Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B306F Parking Assist Sensor - Rear Left Middle



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

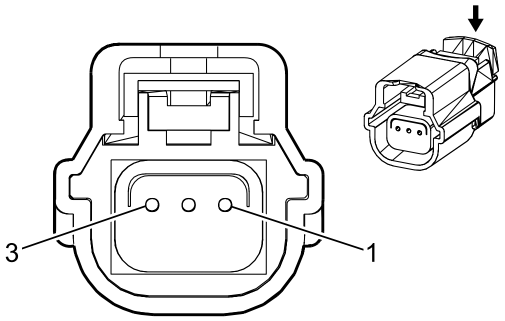
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306F Parking Assist Sensor - Rear Left Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/D-BU	2376	Left Rear Middle Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B306G Parking Assist Sensor - Rear Right Middle



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

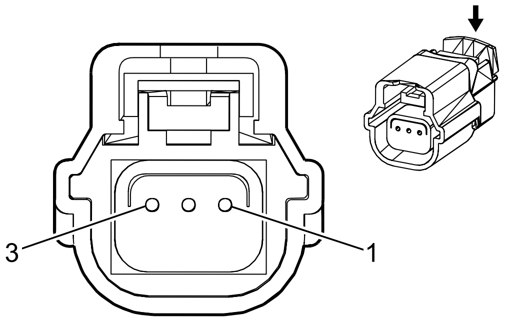
Description: 3-Way F 0.64 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306G Parking Assist Sensor - Rear Right Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/WH	2377	Right Rear Middle Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

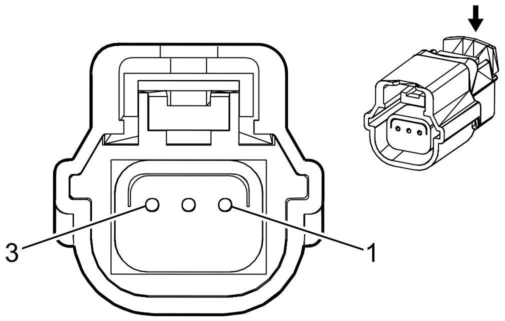
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306H Parking Assist Sensor - Rear Right Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	YE/VT	2378	Right Rear Corner Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B306M Parking Assist Sensor - Side Left Rear



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

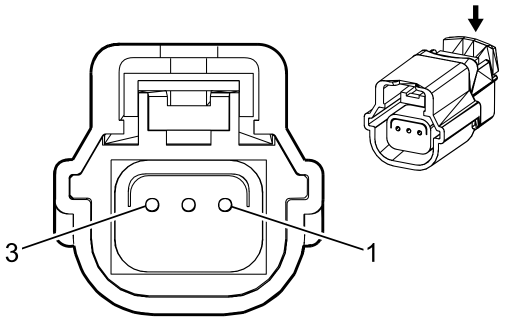
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306M Parking Assist Sensor - Side Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	GN	3156	Left Rear Supplemental Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

B306K Parking Assist Sensor - Side Left Front (UKG)



Connector Part Information

Harness Type: Front Facia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

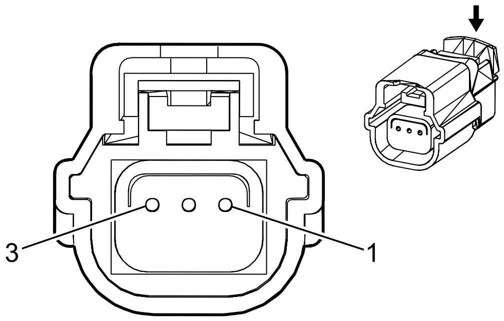
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306K Parking Assist Sensor - Side Left Front (UKG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	GY	3154	Left Front Supplemental Object Sensor Signal	I	—
3	0.5	BK	5214	Front Parking Sensor Low Reference	I	—

B306L Parking Assist Sensor - Side Right Front (UKG)



Connector Part Information

Harness Type: Front Facia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

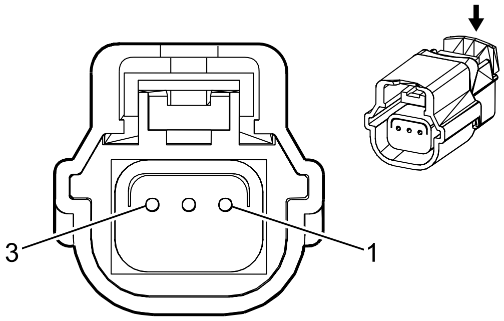
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306L Parking Assist Sensor - Side Right Front (UKG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GN	5213	Front Parking Left/Right/Mid Sensor	I	—
2	0.5	GN	3155	Right Front Supplemental Object Sensor Signal	I	—
3	0.5	BK	5124	Front Parking Sensor Low Reference	I	—

B306N Parking Assist Sensor - Side Right Rear



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13512481

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 0.64 Series, Sealed (BK)

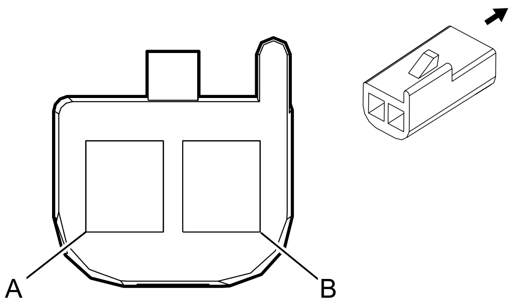
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

B306N Parking Assist Sensor - Side Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	2374	Object Sensor Control	I	—
2	0.5	D-BU	3157	Right Rear Supplemental Object Sensor Signal	I	—
3	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

E1A Accent Lamp - Driver Seat



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 12047662

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 Metri-Pack Series (BK)

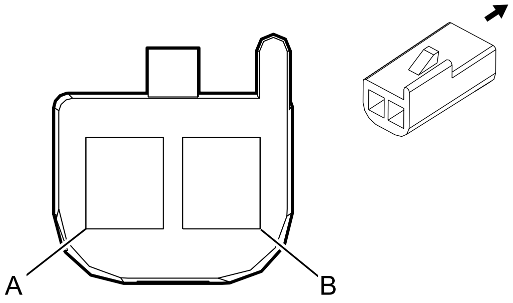
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1A Accent Lamp - Driver Seat

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	GY	157	Interior Lamp Control	I	—
B	0.35	BK	1150	Ground	I	—

E1AA Floor Accent Lamp - Left Front



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12047662

Service Connector: 12085535

Description: 2-Way F 150 Metri-Pack Series (BK)

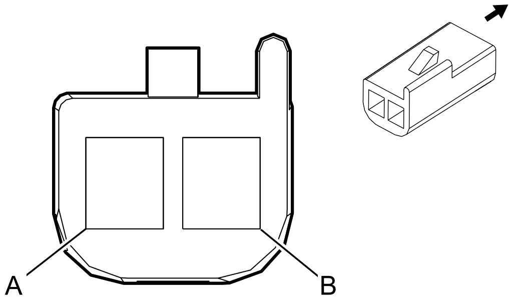
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1AA Floor Accent Lamp - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/YE	7557	LED Ambient Lighting Control 1	I	—
B	0.35	BK/WH	1851	Signal Ground	I	—

E1AB Floor Accent Lamp - Right Front



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12047662

Service Connector: 12085535

Description: 2-Way F 150 Metri-Pack Series (BK)

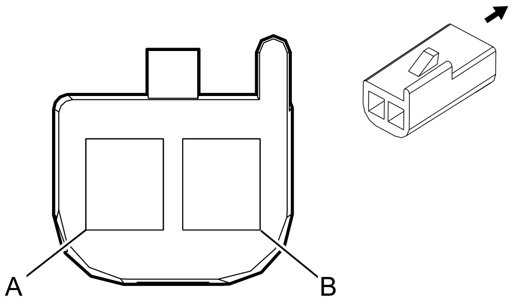
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1AB Floor Accent Lamp - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/YE	7557	LED Ambient Lighting Control 1	I	—
B	0.75	BK	1050	Ground	I	—

E1B Accent Lamp - Passenger Seat



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 12047662

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 Metri-Pack Series (BK)

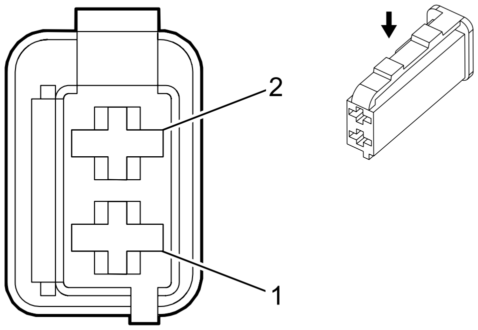
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1B Accent Lamp - Passenger Seat

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	GY	157	Interior Lamp Control	I	—
B	0.35	BK	1250	Ground	I	—

E1C Accent Lamp - Driver Door Handle



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

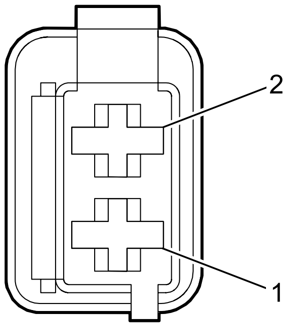
Terminal Part Information

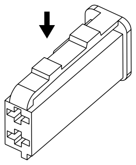
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1C Accent Lamp - Driver Door Handle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E1D Accent Lamp - Driver Door (Z75)





Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

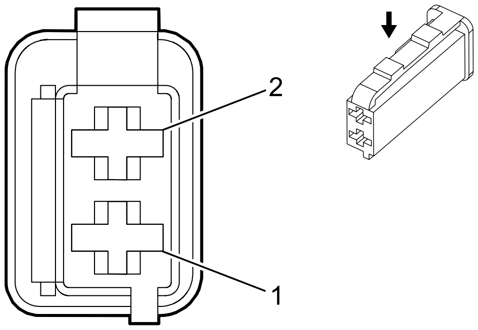
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1D Accent Lamp - Driver Door (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E1E Accent Lamp - Left Rear Door Handle (X88/Z88)



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

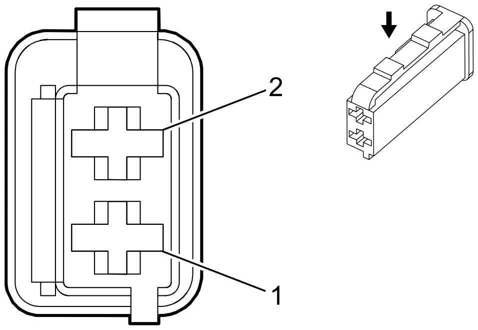
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1E Accent Lamp - Left Rear Door Handle (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.5	BK	1150	Ground	I	—

E1E Accent Lamp - Left Rear Door Handle (Z75)



Connector Part Information

Harness Type: Left Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

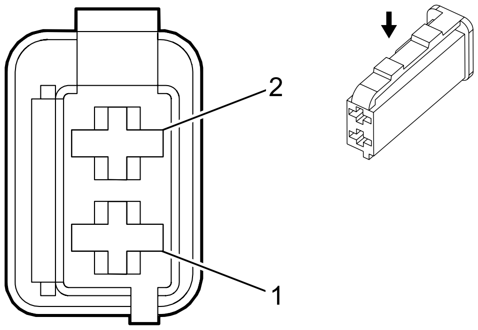
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1E Accent Lamp - Left Rear Door Handle (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E1F Accent Lamp - Right Rear Door Handle (X88/Z88)



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

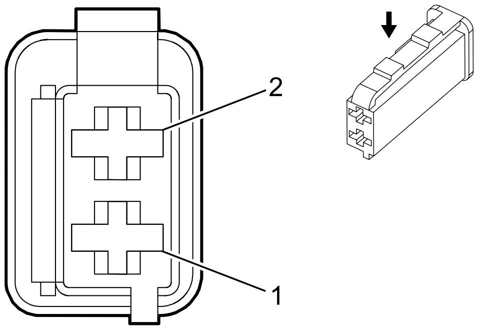
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1F Accent Lamp - Right Rear Door Handle (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.5	BK	1250	Ground	I	—

E1F Accent Lamp - Right Rear Door Handle (Z75)



Connector Part Information

Harness Type: Right Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

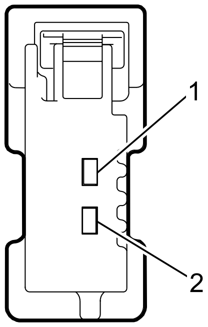
Terminal Part Information

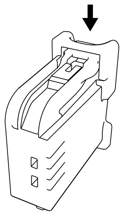
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1F Accent Lamp - Right Rear Door Handle (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

E1L Accent Lamp - Overhead Console





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13595207

Service Connector: 13584097

Description: 2-Way F 1.5 Series (BK)

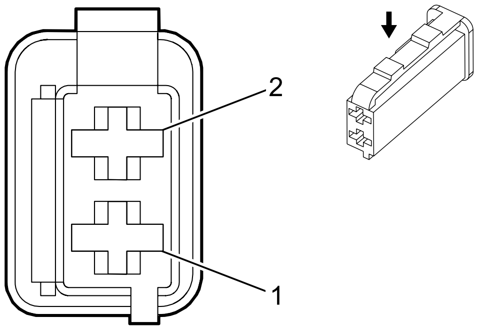
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1L Accent Lamp - Overhead Console

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
2	0.35	BK	1050	Ground	I	—

E1LR Accent Lamp - Left Rear Door



Connector Part Information

Harness Type: Left Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

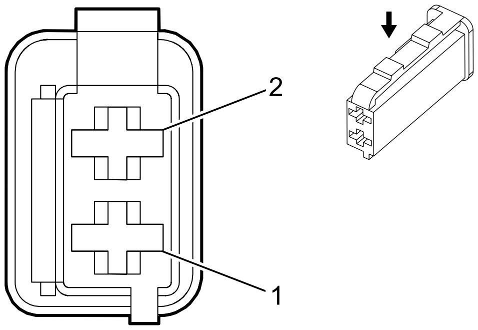
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1LR Accent Lamp - Left Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E1M Accent Lamp - Passenger Door Handle



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

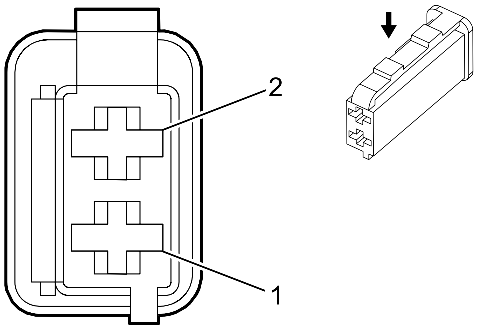
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1M Accent Lamp - Passenger Door Handle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

E1P Accent Lamp - Passenger Door (Z75)



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

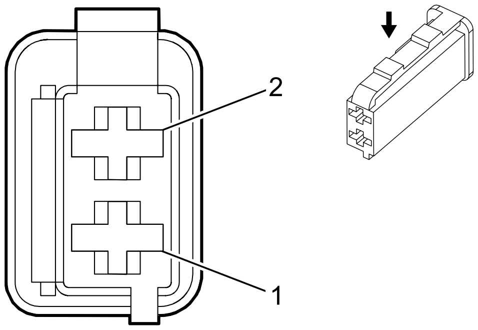
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1P Accent Lamp - Passenger Door (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

E1RR Accent Lamp - Right Rear Door



Connector Part Information

Harness Type: Right Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

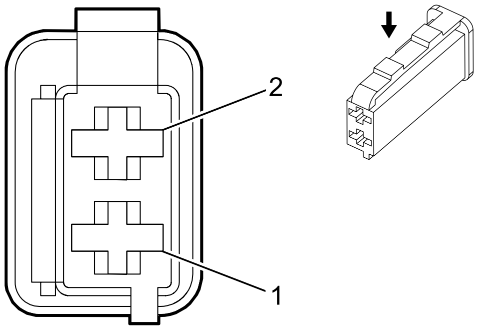
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E1RR Accent Lamp - Right Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

E6 Center High Mounted Stop Lamp



Connector Part Information

Harness Type: High Mount Stop Lamp Jumper

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

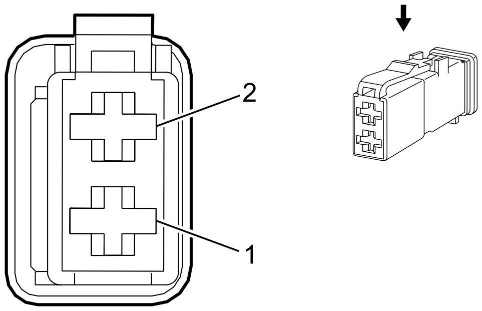
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E6 Center High Mounted Stop Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	I	—
2	0.5	BK	1450	Ground	I	—

E7L License Plate Lamp - Left



Connector Part Information

Harness Type: Liftgate

OEM Connector: 10787633

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 Timer Series (GY)

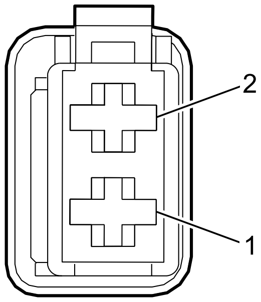
Terminal Part Information

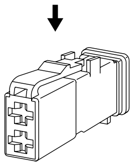
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E7L License Plate Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/YE	6846	Rear License Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—

E7R License Plate Lamp - Right





Connector Part Information

Harness Type: Liftgate

OEM Connector: 10787633

Service Connector: Service by Harness - See Part Catalog

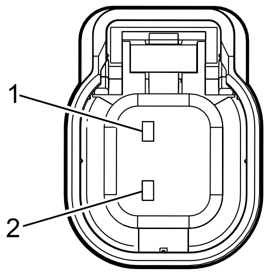
Description: 2-Way F 1.2 Timer Series (GY)

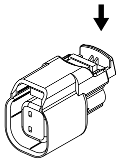
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E7R License Plate Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/YE	6846	Rear License Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—





Connector Part Information

Harness Type: Body

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

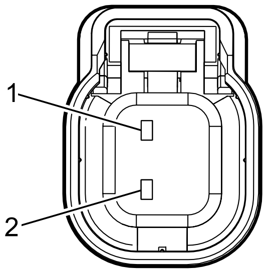
Terminal Part Information

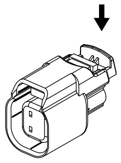
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E8A Door Sill Plate Lamp - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	0.5	BK	1150	Ground	I	—

E8B Door Sill Plate Lamp - Passenger





Connector Part Information

Harness Type: Body

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

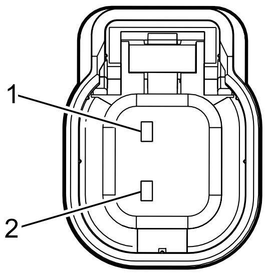
Terminal Part Information

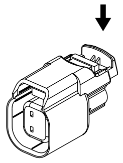
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E8B Door Sill Plate Lamp - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	0.5	BK	1250	Ground	I	—

E8Q Door Sill Plate Lamp - Left Rear





Connector Part Information

Harness Type: Body

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

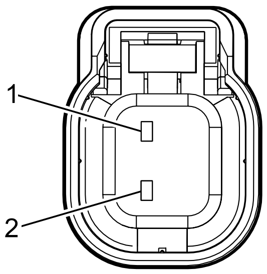
Terminal Part Information

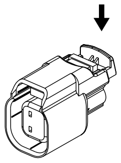
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E8Q Door Sill Plate Lamp - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	0.5	BK	1150	Ground	I	—

E8R Door Sill Plate Lamp - Right Rear





Connector Part Information

Harness Type: Body

OEM Connector: 13828712

Service Connector: 19300543

Description: 2-Way F 1.5 Series, Sealed (BK)

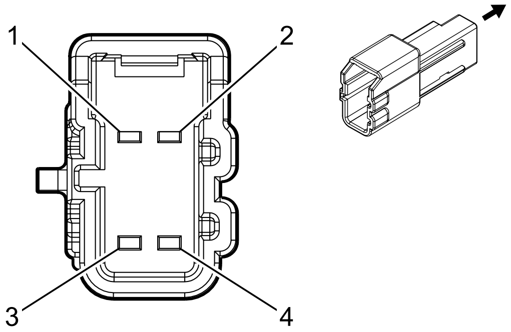
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E8R Door Sill Plate Lamp - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	0.5	BK	1250	Ground	I	—

E14A Seat Heating Element - Driver Back (X88/Z88+KQV)



Connector Part Information

Harness Type: —

OEM Connector: 13595573

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (GY)

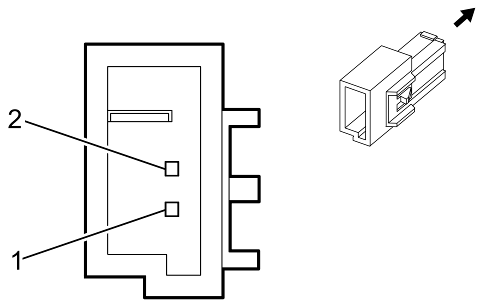
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14A Seat Heating Element - Driver Back (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BR	2432	Driver Heated Back Element Control	I	—
2	0.5	BU	2425	Driver Heated Back NTC Signal	I	—
3	0.5	BK/YE	2080	Driver Heated Seat NTC Low Reference	I	—
4	0.75	BR/BK	2078	Driver Heated Seat Element Low Reference	I	—

E14A Seat Heating Element - Driver Back (Z75+KB6)



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

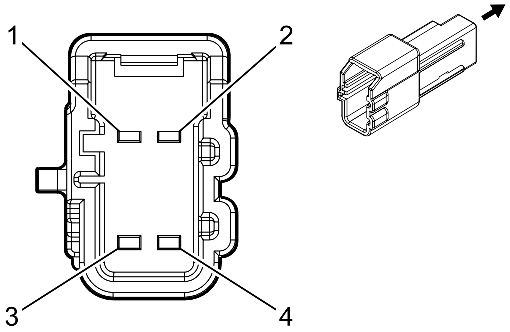
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14A Seat Heating Element - Driver Back (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	2432	Driver Heated Back Element Control	I	—
2	0.75	BK	1150	Ground	I	—

E14B Seat Heating Element - Driver Cushion (X88/Z88+KQV)



Connector Part Information

Harness Type: —

OEM Connector: 13595572

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (BK)

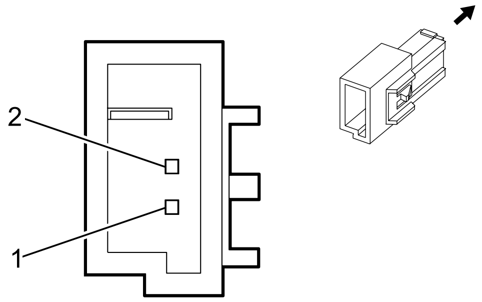
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14B Seat Heating Element - Driver Cushion (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BR/VT	2077	Driver Heated Seat Element Control	I	—
2	0.5	YE/GY	2079	Driver Heated Seat NTC Signal	I	—
3	0.5	BR/YE	2080	Driver Heated Seat NTC Low Reference	I	—
4	0.75	BR/BK	2078	Driver Heated Seat Element Low Reference	I	—

E14B Seat Heating Element - Driver Cushion (Z75+KB6)



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

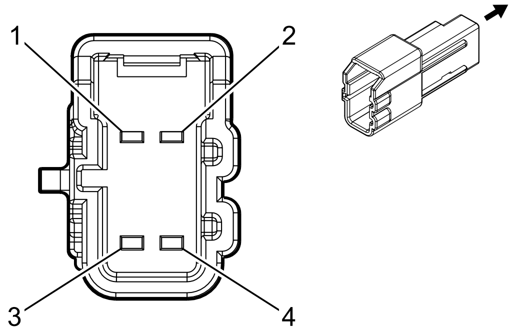
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14B Seat Heating Element - Driver Cushion (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/VT	2077	Driver Heated Seat Element Control	I	—
2	0.75	BK	1150	Ground	I	—

E14C Seat Heating Element - Passenger Back (X88/Z88+KQV)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 13595573

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (GY)

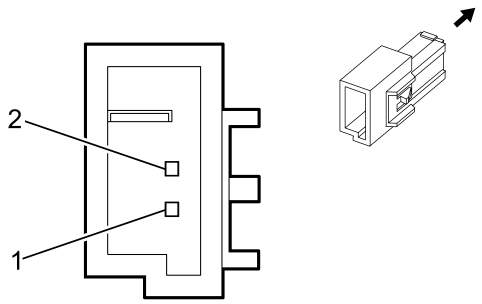
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14C Seat Heating Element - Passenger Back (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/BN	2481	Passenger Heated Back Element Control	I	—
2	0.5	WH/BU	2436	Passenger Heated Back NTC Signal	I	—
3	0.5	BK/GN	2482	Passenger Heated Back NTC Low Reference	I	—
4	0.75	GY/BK	2480	Passenger Heated Seat Element Low Reference	I	—

E14C Seat Heating Element - Passenger Back (Z75+KB6)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

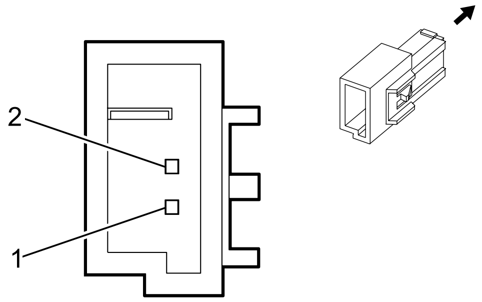
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14C Seat Heating Element - Passenger Back (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/BN	2481	Passenger Heated Back Element Control	I	—
2	0.75	BK	1250	Ground	I	—

E14D Seat Heating Element - Passenger Cushion (KB6+Z75+ULT)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

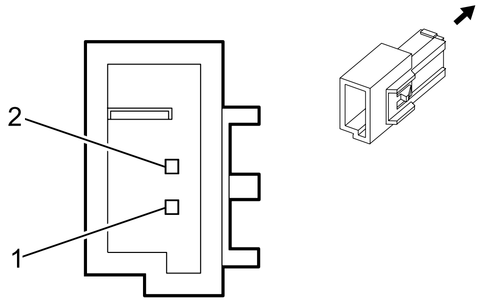
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14D Seat Heating Element - Passenger Cushion (KB6+Z75+ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/BU	2479	Passenger Heated Seat Element Control	I	—
2	0.75	BK	1250	Ground	I	—

E14D Seat Heating Element - Passenger Cushion (KB6+Z75-ULT)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

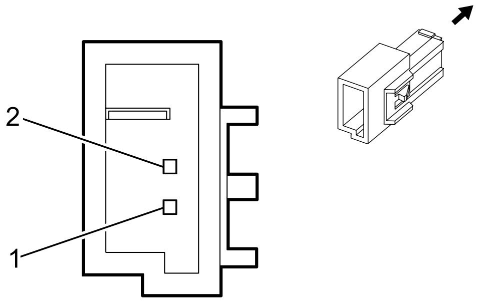
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14D Seat Heating Element - Passenger Cushion (KB6+Z75-ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/BU	2479	Passenger Heated Seat Element Control	I	—
2	0.75	BK	1250	Ground	I	—

E14D Seat Heating Element - Passenger Cushion (X88/Z88+KQV)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

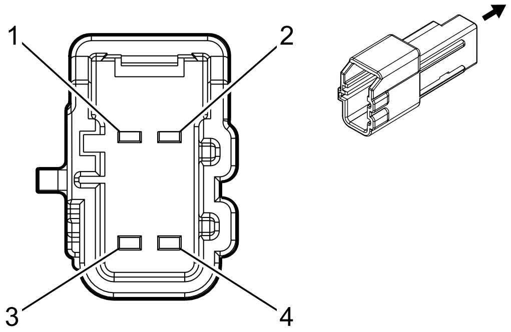
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14D Seat Heating Element - Passenger Cushion (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/BU	2479	Passenger Heated Seat Element Control	I	—
2	0.75	BK	1250	Ground	I	—

E14F Seat Heating Element - Left Rear Cushion (X88/Z88+KA6)



Connector Part Information

Harness Type: Left Rear Seat

OEM Connector: 6098-7779

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (BK)

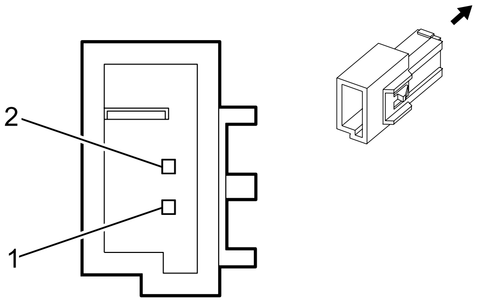
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

E14F Seat Heating Element - Left Rear Cushion (X88/Z88+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	2294	Left Rear Heated Seat Cushion Element Control	I	—
2	0.75	WH/BU	7047	Left Rear Cushion NTC Signal	I	—
3	0.75	BU/WH	7048	Left Rear Cushion NTC Low Reference	I	—
4	0.75	BN/BK	2295	Left Rear Heated Seat Cushion Element Low Reference	I	—

E14F Seat Heating Element - Left Rear Cushion (Z75+KA6)



Connector Part Information

Harness Type: Rear Seat

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

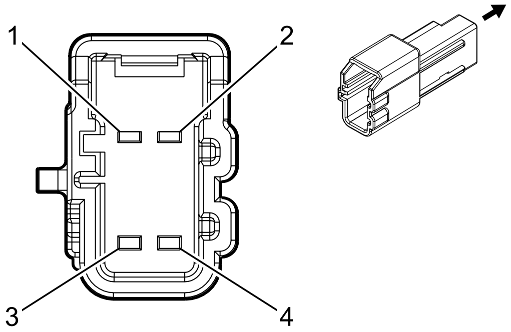
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14F Seat Heating Element - Left Rear Cushion (Z75+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	2294	Left Rear Heated Seat Cushion Element Control	I	—
2	0.75	BK	1150	Ground	I	—

E14H Seat Heating Element - Right Rear Cushion (X88/Z88+KA6)



Connector Part Information

Harness Type: Right Rear Seat

OEM Connector: 6098-7779

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (BK)

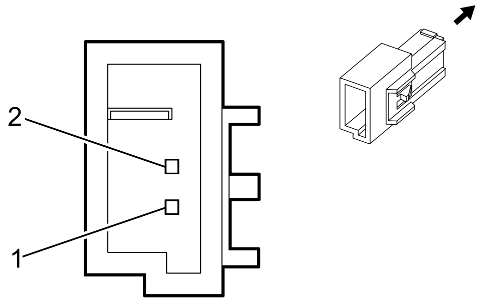
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14H Seat Heating Element - Right Rear Cushion (X88/Z88+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN/BN	2296	Right Rear Heated Seat Cushion Element Control	I	—
2	0.5	BN/GN	2300	Right Rear Heated Seat Sensor Signal	I	X88/Z88+KA6
3	0.5	BK/GY	2301	Right Rear Heated Seat Sensor Low Reference	I	X88/Z88+KA6
4	0.75	GN/BK	2297	Right Rear Heated Seat Cushion Element Low Reference	I	X88/Z88+KA6

E14H Seat Heating Element - Right Rear Cushion (Z75+KA6)



Connector Part Information

Harness Type: Rear Seat

OEM Connector: AIT2WSB-02A-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 0.64 Series (BK)

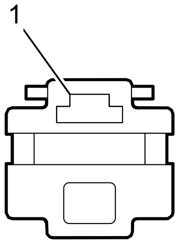
Terminal Part Information

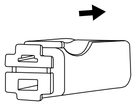
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E14H Seat Heating Element - Right Rear Cushion (Z75+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN/BN	2296	Right Rear Heated Seat Cushion Element Control	I	—
2	0.75	BK	1250	Ground	I	—

E18 Rear Defogger Grid X1





Connector Part Information

Harness Type: Liftgate

OEM Connector: 13511619

Service Connector: Service by Harness - See Part Catalog

Description: 1-Way F 250 Series (BK)

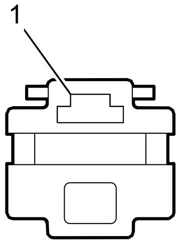
Terminal Part Information

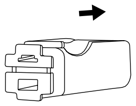
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E18 Rear Defogger Grid X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BK	1450	Ground	I	—

E18 Rear Defogger Grid X2





Connector Part Information

Harness Type: Liftgate

OEM Connector: 13511619

Service Connector: Service by Harness - See Part Catalog

Description: 1-Way F 250 Series (BK)

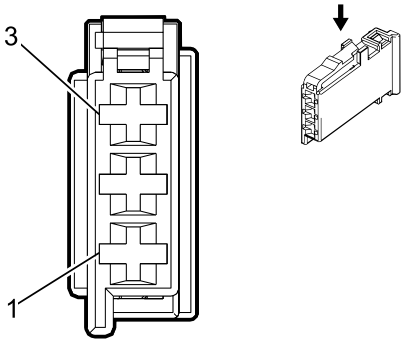
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E18 Rear Defogger Grid X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BK	293	Rear Defog Element Control	I	—

E28 Center Console Compartment Lamp



Connector Part Information

Harness Type: Floor Console

OEM Connector: 10865339

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Micro-Timer Series (BK)

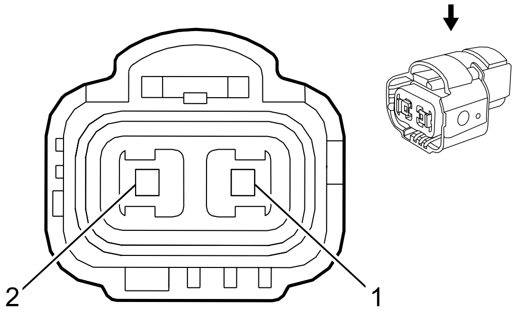
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E28 Center Console Compartment Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6815	Inadvertent Power Control	I	—
2	0.75	BK	1050	Ground	I	—
3	—	—	—	Not Occupied	—	—

E29LF Fog Lamp - Left Front (X88)



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13873770

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (BK)

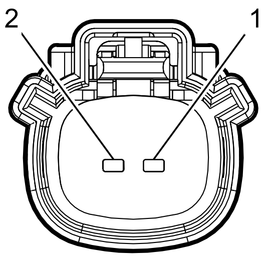
Terminal Part Information

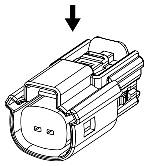
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29LF Fog Lamp - Left Front (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	150	Ground	I	—

E29LR Fog Lamp - Left Rear (X88)





Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13866728

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (BK)

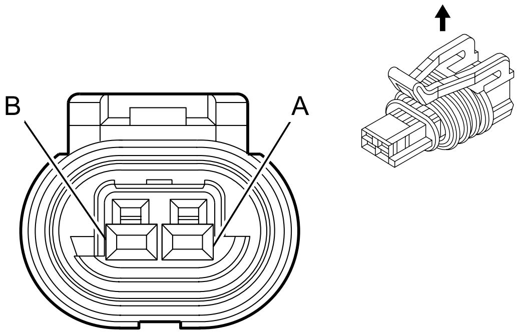
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29LR Fog Lamp - Left Rear (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GY	122	Rear Fog Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—

E29LR Fog Lamp - Left Rear (Z75)



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 15449028

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series, Sealed (BK)

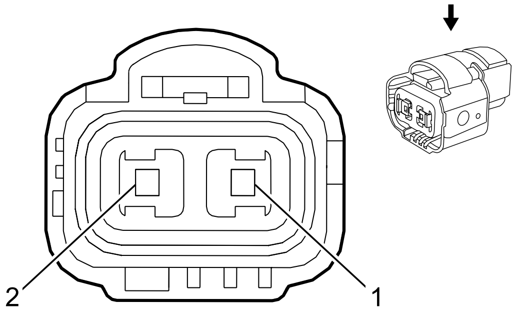
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29LR Fog Lamp - Left Rear (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/GY	122	Rear Fog Lamp Control	I	—
B	0.5	BK	1450	Ground	I	—

E29RF Fog Lamp - Right Front (X88)



Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13873770

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (BK)

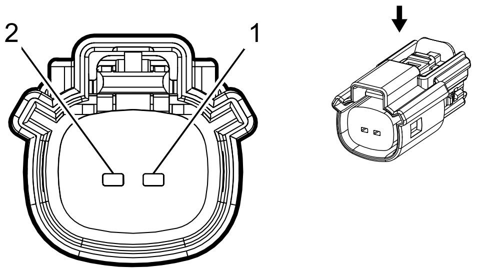
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29RF Fog Lamp - Right Front (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	250	Ground	I	—

E29RR Fog Lamp - Right Rear (X88)



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13866728

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (BK)

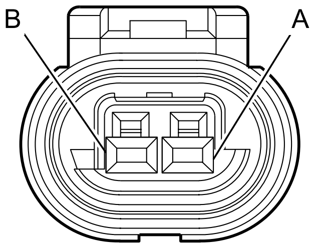
Terminal Part Information

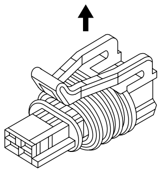
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29RR Fog Lamp - Right Rear (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/GY	122	Rear Fog Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—

E29RR Fog Lamp - Right Rear (Z75)





Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 15449028

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series, Sealed (BK)

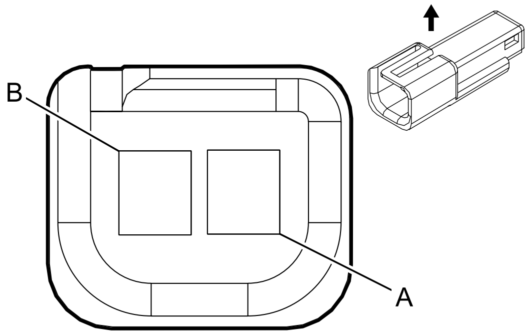
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E29RR Fog Lamp - Right Rear (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/GY	122	Rear Fog Lamp Control	I	—
B	0.5	BK	1450	Ground	I	—

E31L Sunshade Mirror Lamp - Left



Connector Part Information

Harness Type: Headliner

OEM Connector: 12047663

Service Connector: 13584278

Description: 2-Way M 150 Metri-Pack Series (BK)

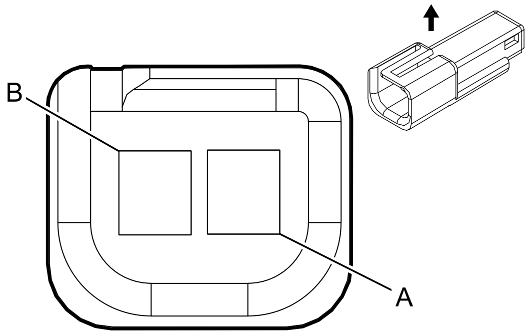
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E31L Sunshade Mirror Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/BN	6815	Inadvertent Power Control	I	—
B	0.5	BK	1050	Ground	I	—

E31R Sunshade Mirror Lamp - Right



Connector Part Information

Harness Type: Headliner

OEM Connector: 12047663

Service Connector: 13584278

Description: 2-Way M 150 Metri-Pack Series (BK)

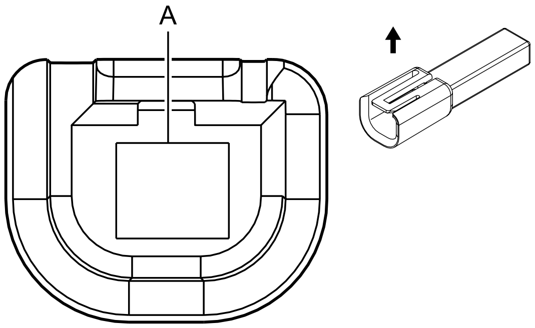
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E31R Sunshade Mirror Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/BN	6815	Inadvertent Power Control	I	—
B	0.5	BK	1050	Ground	I	—

E35L Exterior Spot Lamp - Left



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12047683

Service Connector: 12101828

Description: 1-Way M 150 Metri-Pack Series (BK)

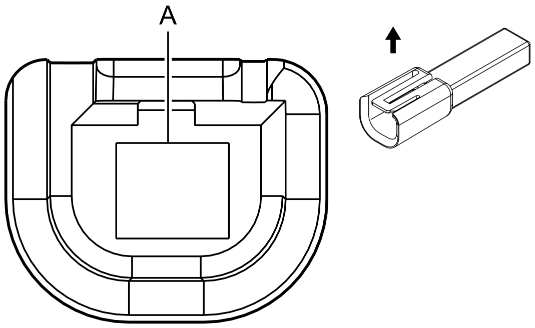
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E35L Exterior Spot Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	RD/VT	4640	Battery Positive Voltage	I	—

E35R Exterior Spot Lamp - Right



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12047683

Service Connector: 12101828

Description: 1-Way M 150 Metri-Pack Series (BK)

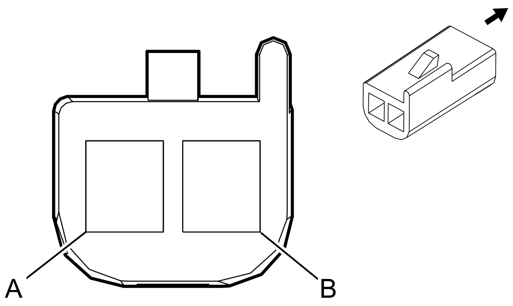
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E35R Exterior Spot Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	RD/GY	4140	Battery Positive Voltage	I	—

E36AH Dome Lamp



Connector Part Information

Harness Type: Headliner

OEM Connector: 12047662

Service Connector: 12085535

Description: 2-Way F 150 Metri-Pack Series (BK)

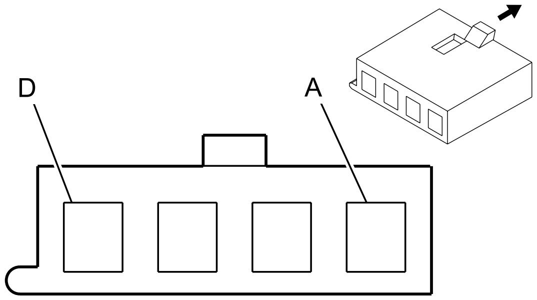
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E36AH Dome Lamp

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GY	157	Interior Lamp Control	I	—
B	0.5	BK	1450	Ground	I	—

E37B Dome/Reading Lamps - 2nd Row



Connector Part Information

Harness Type: Headliner

OEM Connector: 12092162

Service Connector: 15306021

Description: 4-Way F 150 Metri-Pack Series (BK)

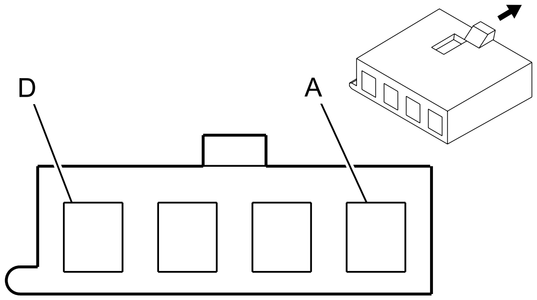
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37B Dome/Reading Lamps - 2nd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/BN	6815	Inadvertent Power Control	I	—
B	0.5	BK	1050	Ground	I	—
C	0.5	GY	157	Interior Lamp Control	I	—
D	0.5	YE	6817	LED Backlight Dimming Control	I	—

E37C Dome/Reading Lamps - 3rd Row



Connector Part Information

Harness Type: Headliner

OEM Connector: 12092162

Service Connector: 15306021

Description: 4-Way F 150 Metri-Pack Series (BK)

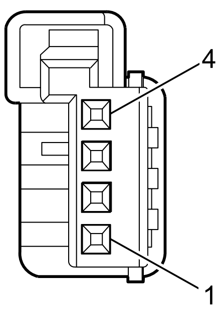
Terminal Part Information

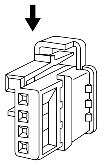
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37C Dome/Reading Lamps - 3rd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH/BN	6815	Inadvertent Power Control	I	—
B	0.5	BK	1050	Ground	I	—
C	0.5	GY	157	Interior Lamp Control	I	—
D	0.5	YE	6817	LED Backlight Dimming Control	I	—

E37EL Dome/Reading Lamps - Front Overhead Console Left





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 10812166

Service Connector: 19119349

Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

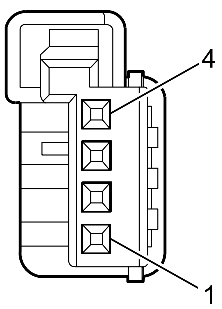
Terminal Part Information

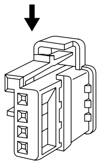
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37EL Dome/Reading Lamps - Front Overhead Console Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E37ER Dome/Reading Lamps - Front Overhead Console Right





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 10812166

Service Connector: 19119349

Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

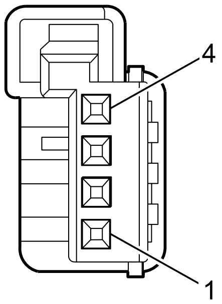
Terminal Part Information

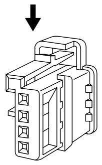
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37ER Dome/Reading Lamps - Front Overhead Console Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E37H Dome/Reading Lamps - Left Roof Rail





Connector Part Information

Harness Type: Headliner

OEM Connector: 10812166

Service Connector: 19119349

Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

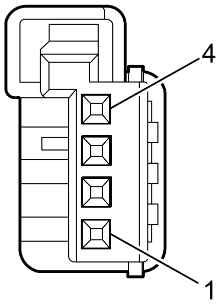
Terminal Part Information

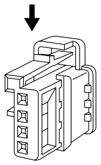
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37H Dome/Reading Lamps - Left Roof Rail

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E37J Dome/Reading Lamps - Right Roof Rail





Connector Part Information

Harness Type: Headliner

OEM Connector: 10812166

Service Connector: 19119349

Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

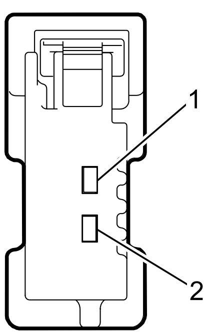
Terminal Part Information

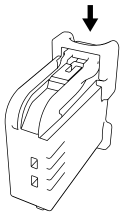
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E37J Dome/Reading Lamps - Right Roof Rail

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	6817	LED Backlight Dimming Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	BK	1050	Ground	I	—

E38 Flood Lamp - Center Console





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13595207

Service Connector: 13584097

Description: 2-Way F 1.5 Series (BK)

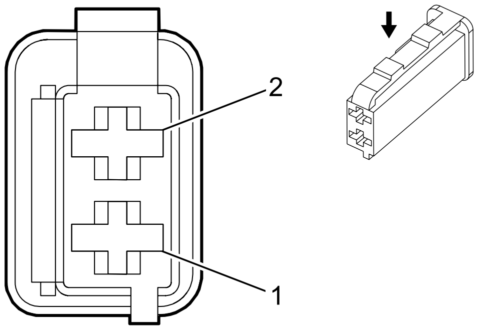
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	—	Pending	No Tool Required	—	—	—	—

E38 Flood Lamp - Center Console

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
2	0.35	BK	1050	Ground	I	—

E55LR Flood Lamp - Left Rear Door Pocket



Connector Part Information

Harness Type: Left Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

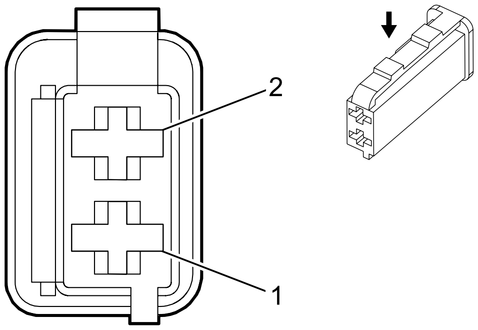
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E55LR Flood Lamp - Left Rear Door Pocket

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E55RR Flood Lamp - Right Rear Door Pocket



Connector Part Information

Harness Type: Right Rear Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

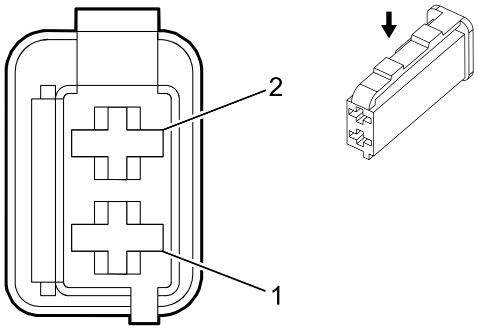
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

E55RR Flood Lamp - Right Rear Door Pocket

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

E63D Flood Lamp - Driver Door Handle (Z75)



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

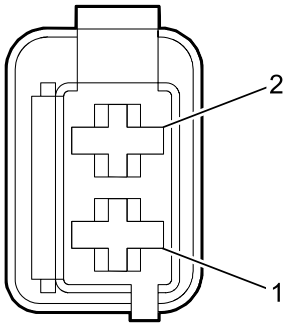
Terminal Part Information

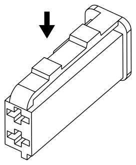
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

E63D Flood Lamp - Driver Door Handle (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1150	Ground	I	—

E63P Flood Lamp - Passenger Door Handle (Z75)





Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13670097

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.6 Timer Series (BK)

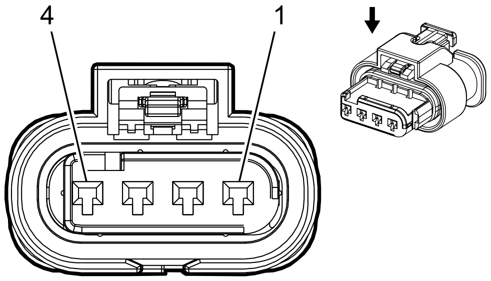
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

E63P Flood Lamp - Passenger Door Handle (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	7557	LED Ambient Lighting Control 1	I	—
2	0.35	BK	1250	Ground	I	—

F101 Passenger Instrument Panel Air Bag X1



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13854531

Service Connector: 13586137

Description: 4-Way F 1.2 Series, Sealed (YE)

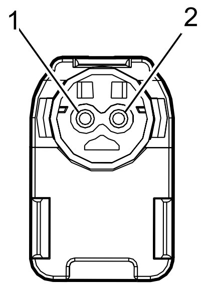
Terminal Part Information

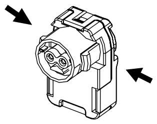
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F101 Passenger Instrument Panel Air Bag X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
2	0.35	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—
3	0.35	GY/OG	3027	Passenger IP Module Stage 2 High Control	I	—
4	0.35	OG/VT	3026	Passenger IP Module Stage 2 Low Control	I	—

F101 Passenger Instrument Panel Air Bag X2





Connector Part Information

Harness Type: —

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F

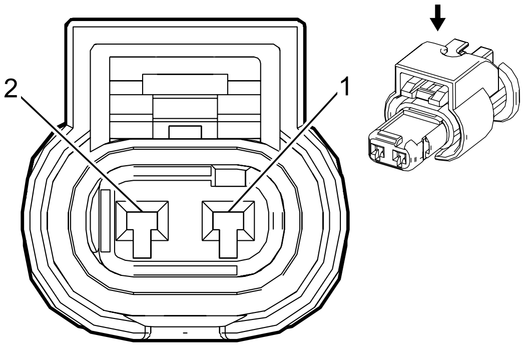
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

F101 Passenger Instrument Panel Air Bag X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	3027	Passenger IP Module Stage 2 High Control	I	—
2	0.5	PU	3026	Passenger IP Module Stage 2 Low Control	I	—

F105RR Roof Rail Air Bag - Right Rear



Connector Part Information

Harness Type: Body

OEM Connector: 13863037

Service Connector: 13587886

Description: 2-Way F 1.2 MCP Series, Sealed (YE)

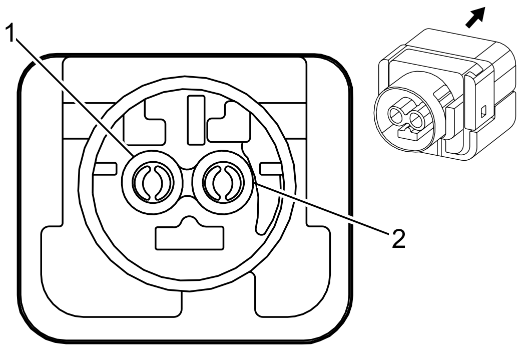
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F105RR Roof Rail Air Bag - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/GY	5021	Right Front Head Curtain Module High Control	I	—
2	0.35	WH/OG	5022	Right Front Head Curtain Module Low Control	I	—

F106D Seat Side Air Bag - Driver (KB6)



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: PPI0001142

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

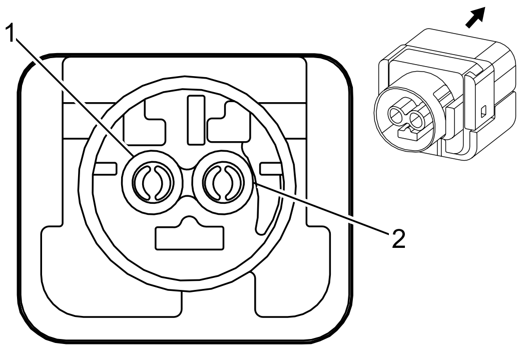
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106D Seat Side Air Bag - Driver (KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/BU	3068	Driver Side Impact Module High Control	I	—
2	0.5	GN/OG	3069	Driver Side Impact Module Low Control	I	—

F106D Seat Side Air Bag - Driver (ULT+A45)



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: PPI0001142

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

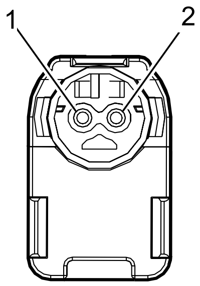
Terminal Part Information

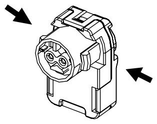
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106D Seat Side Air Bag - Driver (ULT+A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/BU	3068	Driver Side Impact Module High Control	I	—
2	0.5	GN/OG	3069	Driver Side Impact Module Low Control	I	—

F106DA Seat Side Air Bag - Driver Inboard (KB6)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: PPI0001722

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (L-GN with YE Cover)

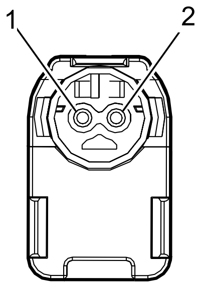
Terminal Part Information

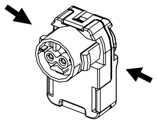
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106DA Seat Side Air Bag - Driver Inboard (KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	4107	Center Side Impact Module High Control	I	—
2	0.5	VT	4106	Center Side Impact Module Low Control	I	—

F106DA Seat Side Air Bag - Driver Inboard (ULT+A45)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: PPI0001722

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (L-GN with YE Cover)

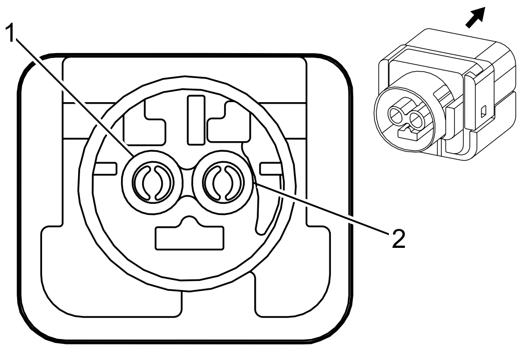
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106DA Seat Side Air Bag - Driver Inboard (ULT+A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/WH	4107	Center Side Impact Module High Control	I	—
2	0.5	VT	4106	Center Side Impact Module Low Control	I	—

F106P Seat Side Air Bag - Passenger (KB6)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: PPI0001142

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

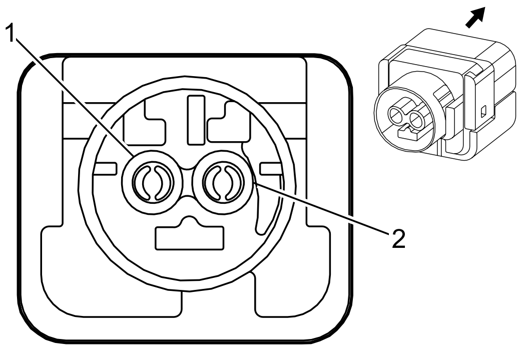
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106P Seat Side Air Bag - Passenger (KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GY	3066	Passenger Side Impact Module High Control	I	—
2	0.5	BN/OG	3067	Passenger Side Impact Module Low Control	I	—

F106P Seat Side Air Bag - Passenger (ULT+A45)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: PPI0001142

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F FPB 180-1 Series (BK with YE Cover)

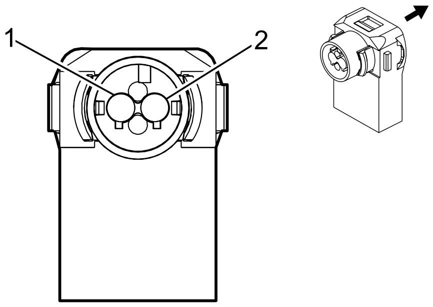
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F106P Seat Side Air Bag - Passenger (ULT+A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/GY	3066	Passenger Side Impact Module High Control	I	—
2	0.5	BN/OG	3067	Passenger Side Impact Module Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (AX7)



Connector Part Information

Harness Type: Body

OEM Connector: 33154433

Service Connector: 19354083

Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

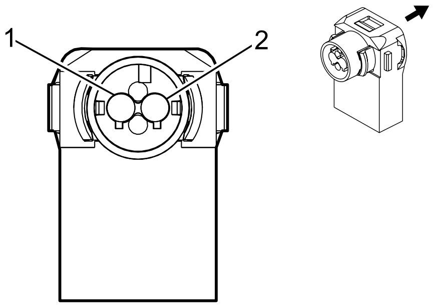
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F112D Seat Belt Retractor Pretensioner - Driver (AX7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver (-AX7)



Connector Part Information

Harness Type: Body

OEM Connector: 33154433

Service Connector: 19354083

Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

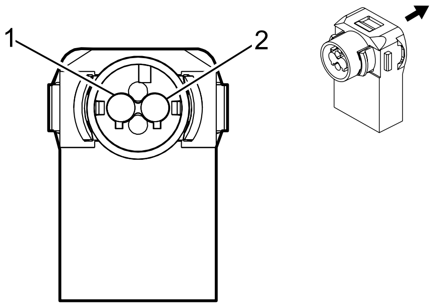
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F112D Seat Belt Retractor Pretensioner - Driver (-AX7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger (AX7)



Connector Part Information

Harness Type: Body

OEM Connector: 33154433

Service Connector: 19354083

Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

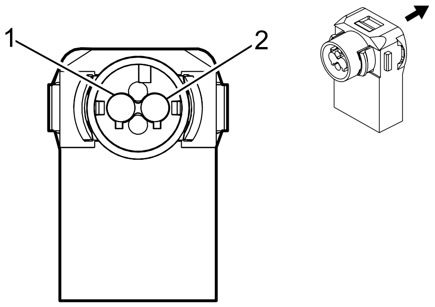
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F112P Seat Belt Retractor Pretensioner - Passenger (AX7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger (-AX7)



Connector Part Information

Harness Type: Body

OEM Connector: 33154433

Service Connector: 19354083

Description: 2-Way F 1.0 MAC Series (PU with YE Cover)

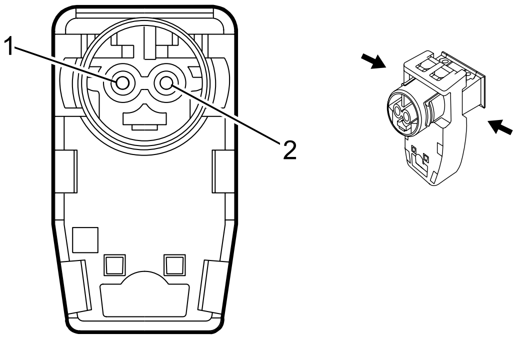
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F112P Seat Belt Retractor Pretensioner - Passenger (-AX7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

F113D Seat Belt Anchor Pretensioner - Driver



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: PPI0001721

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

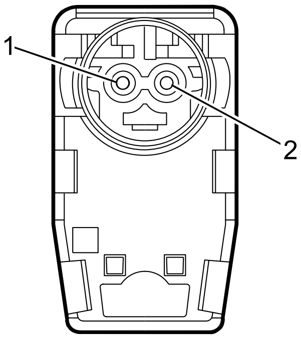
Terminal Part Information

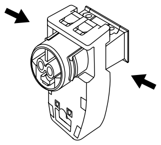
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F113D Seat Belt Anchor Pretensioner - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	YE/OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—

F113P Seat Belt Anchor Pretensioner - Passenger





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: PPI0001721

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Series, Sealed (BK with YE Cover)

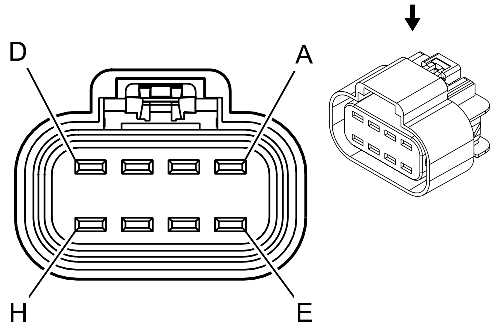
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

F113P Seat Belt Anchor Pretensioner - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG/BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	GY/OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—

G3 Air Suspension Compressor



Connector Part Information

Harness Type: Chassis

OEM Connector: 15326654

Service Connector: 88986254

Description: 8-Way F 280 GT Series, Sealed (BK)

Terminal Part Information

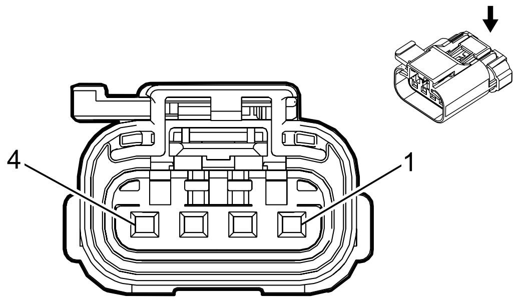
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G3 Air Suspension Compressor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/GN	6075	Real Time Damping Air Pressure Sensor Signal	I	—
B	0.75 0.75	RD/GN WH/D-BU	2440 3261	Battery Positive Voltage Automatic Level Control Exhaust Solenoid Control	I I	Z85 Z95
C	0.75	WH/GN	320	Automatic Level Control Exhaust Solenoid Control	I	—
D	—	—	—	Not Occupied	—	—
E	2.5	WH/VT	2248	Real Time Damping Leveling Motor Control	I	—
F	0.5	BK/YE	6077	Real Time Damping Air Pressure Sensor Low Reference	I	—
G	2.5	BK	1750	Ground	I	—
H	0.5	D-BU/RD	6076	Real Time Damping Air Pressure Sensor 5V Reference	I	—

H	0.5	D-BU/RD	6076	Real Time Damping Air Pressure Sensor 5V Reference	I	—

G10L Cooling Fan Motor - Left



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33234266

Service Connector: 19354081

Description: 4-Way F 2.8 APEX Series, Sealed (BK)

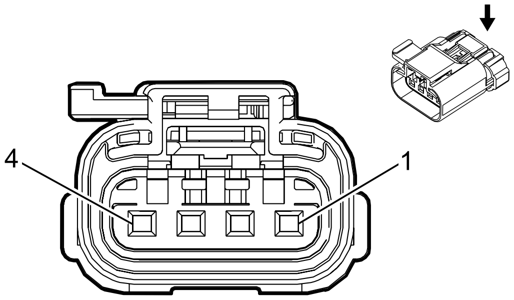
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G10L Cooling Fan Motor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	150	Ground	I	—
2	4	RD/WH	342	Battery Positive Voltage	I	—
4	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—

G10R Cooling Fan Motor - Right



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33234266

Service Connector: 19354081

Description: 4-Way F 2.8 APEX Series, Sealed (BK)

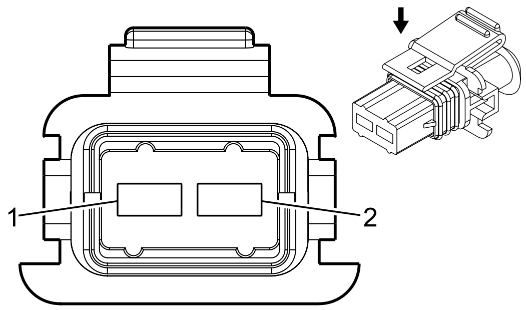
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G10R Cooling Fan Motor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	250	Ground	I	—
2	4	RD/GY	642	Battery Positive Voltage	I	—
4	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	I	—

G13 Generator



Connector Part Information

Harness Type: Engine

OEM Connector: 12186308

Service Connector: 13585849

Description: 2-Way F Junior Power Timer Series, Sealed (BK)

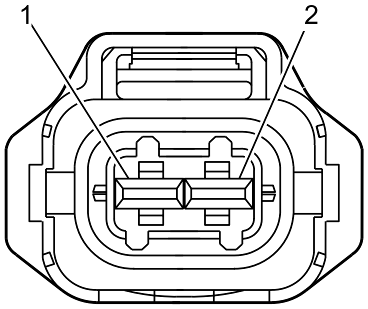
Terminal Part Information

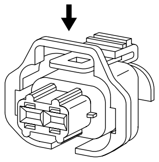
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G13 Generator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	25	Charge Indicator Control	II	—
2	0.5	GY	23	Generator Field Duty Cycle Signal	I	—

G18 High Pressure Fuel Pump (L83/L86)





Connector Part Information

Harness Type: Even Fuel Injector Harness

OEM Connector: 88988163

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 2.8 Kompakt Series, Sealed (BK)

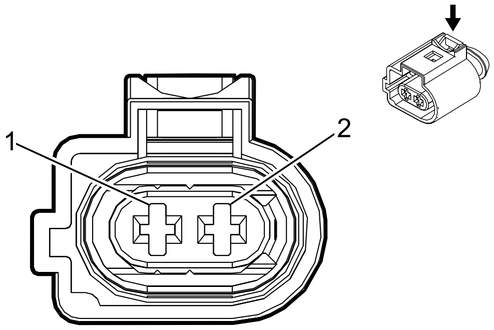
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

G18 High Pressure Fuel Pump (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	7301	High Pressure Fuel Pump Actuator High - Control	I	—
2	0.75	VT/BK	7300	High Pressure Fuel Pump Actuator Low - Control	I	—

G19 Rear Window Washer Pump



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13930731

Service Connector: 19301746

Description: 2-Way F 2.8 MCP Series, Sealed (NA)

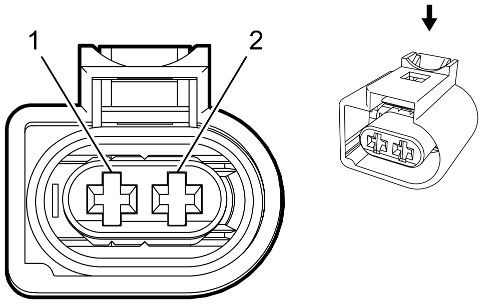
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G19 Rear Window Washer Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU/VT	392	Rear Window Washer Pump Control	I	—
2	0.75	BK	150	Ground	I	—

G24 Windshield Washer Pump



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 10863916

Service Connector: 13576532

Description: 2-Way F 2.8 MDK5 Series, Sealed (BK)

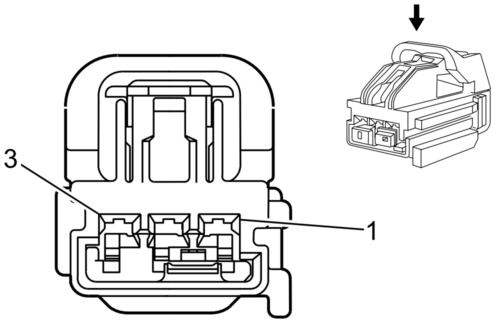
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G24 Windshield Washer Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY/VT	228	Windshield Washer Pump Control	I	—
2	0.75	BK	150	Ground	I	—

G31D Seat Lumbar/Bolster Pump - Driver



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-3440-40

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.5 Kaizen Series (L-GY)

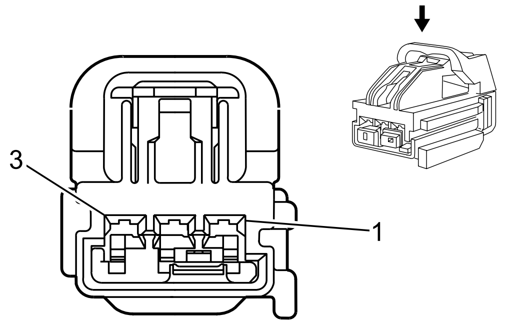
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G31D Seat Lumbar/Bolster Pump - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	901	—	I	—
2	0.5	BK	1150	Ground	I	—
3	0.5	GN	903	—	I	—

G31P Seat Lumbar/Bolster Pump - Passenger



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-3440-40

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.5 Kaizen Series (L-GY)

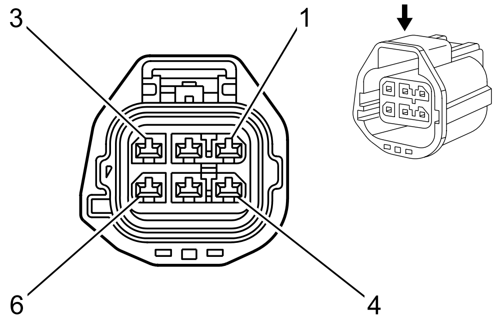
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

G31P Seat Lumbar/Bolster Pump - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	901	—	I	—
2	0.5	BK	1250	Ground	I	—
3	0.5	GN	903	—	I	—

K4 Assist Step Control Module X1



Connector Part Information

Harness Type: Chassis

OEM Connector: 13573348

Service Connector: 19354363

Description: 6-Way F 2.8 Series, Sealed (D-GY)

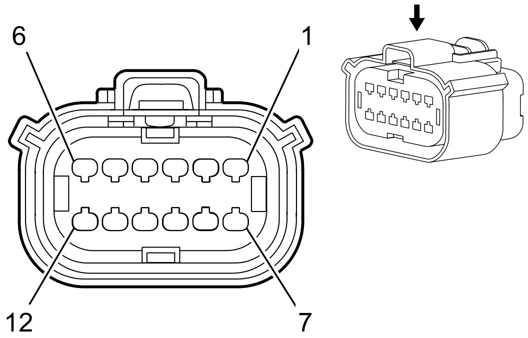
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K4 Assist Step Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	GN	7469	Articulating Running Boards Motor Right Control Retract	I	—
2	2.5	BK	2150	Ground	II	—
3	2	WH/BN	7471	Articulating Running Boards Motor Left Control Extend	I	—
4	2	D-BU	7470	Articulating Running Boards Motor Right Control Extend	I	—
5	2.5	RD/YE	1142	Battery Positive Voltage	II	—
6	2	GY	7472	Articulating Running Boards Motor Left Control Retract	I	—

K4 Assist Step Control Module X2



Connector Part Information

Harness Type: Chassis

OEM Connector: 15525970

Service Connector: 19329931

Description: 12-Way F 1.5 Series, Sealed (BK)

Terminal Part Information

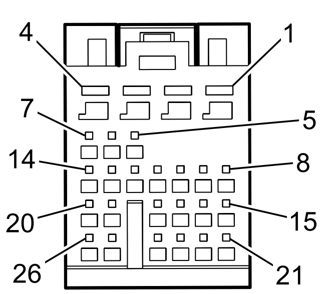
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

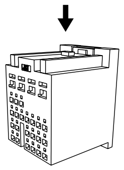
K4 Assist Step Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/RD	7468	Running Boards Motor Hall Sensor Left 5V Reference	I	—
2	0.5	GN/RD	7464	Running Boards Motor Hall Sensor Right 5V Reference	I	—
3	0.5	YE	7467	Running Boards Motor Hall Sensor Left Signal	I	—
4	0.5	VT	7465	Running Boards Motor Hall Sensor Right Signal	I	—
5	0.5	YE/BN	7466	Running Boards Motor Hall Sensor Left Low Reference	I	—
6	0.5	YE/BK	7463	Running Boards Motor Hall Sensor Right Low Reference	I	—
7	—	—	—	Not Occupied	—	—
8	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
9	—	—	—	Not Occupied	—	—

9	—	—	—	Not Occupied	—	—
10	0.5	BN/WH	7462	Running Boards Disable Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—

K9 Body Control Module X1





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13943345

Service Connector: 13582966

Description: 26-Way F 0.64, 2.8 Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	C	A
II	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
III	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

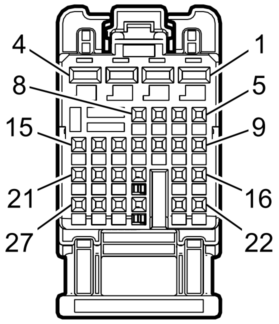
K9 Body Control Module X1

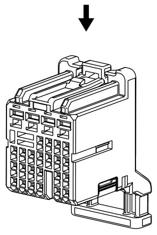
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1850	Ground	II	—
2	0.75	RD/D-BU	2540	Battery Positive Voltage	II	—
3	1	RD/GY	2140	Battery Positive Voltage	I	—
4	0.5	RD/BN	2240	Battery Positive Voltage	II	—
5	0.5	WH	6816	Indicator Dimming Control	III	—
6	0.35	BN/WH	4046	Glove Box Door Release Relay Control	III	—
7	0.35	BK/YE	5005	Instrument Panel Lamp Dimmer Switch Low Reference	III	—

8	0.35	BN/BK	5720	Ignition Mode Switch Accessory LED Signal	III	—
9	—	—	—	Not Occupied	—	—
10	0.5	D-BU/VT	1134	Park Brake Switch Signal	III	—
11	0.35	GN/BN	306	Headlamp Switch Headlamps Off Signal Control	III	—
12	0.35	D-BU/GY	187	Rear Fog Lamp Switch Signal	III	—
13	0.35	D-BU/RD	1688	5V Reference	III	—
14	0.35	GY/GN	328	Interior Lamp Defeat Switch Signal	III	—
15	0.75	D-BU/GN	6841	Rear Lamp Flasher Signal	III	6J7
	0.35	D-BU/GY	192	Front Fog Lamp Switch Signal	III	T3U
16	0.35	WH/VT	103	Headlamp Switch On Signal	III	—
17	—	—	—	Not Occupied	—	—
18	0.35	D-BU/VT	5904	Steering Column Lock Status Signal	III	—
19	0.35	BK/GN	552	Sensor Low Reference	III	—
20	0.35	D-BU/BK	5719	Ignition Mode Switch Start LED Signal	III	—
21	0.35	GY	728	Security Indicator Control	III	—
22	0.35	GN/GY	13	Headlamp Switch Park Lamp Signal	III	—
23	0.5	VT/GN	7558	LED Ambient Lighting Control 2	III	—

24	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	III	—
25	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	III	—
26	0.35	D-BU/WH	3275	Remote Function Actuator Receive Signal	III	—

K9 Body Control Module X2





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13943361

Service Connector: 13576637

Description: 27-Way F 0.64, 2.8 Series (L-BU)

Terminal Part Information

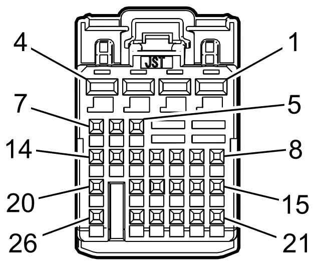
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

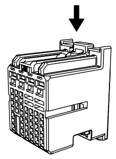
K9 Body Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/WH	2740	Battery Positive Voltage	I	—
2	0.75	BK	1850	Ground	I	—
3	0.5	RD/BN	2940	Battery Positive Voltage	I	—
4	0.75	RD/VT	4040	Battery Positive Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	GY	5697	Child Lockout Indicator Control	II	—
7	0.35	WH/GN	526	Stop Lamp Switch Signal	II	—
8	0.5	YE	6817	LED Backlight Dimming Control	II	—

9	0.35	YE/GY	44	Instrument Panel Lamp Dimmer Switch Signal	II	—
10	0.35	WH/D-BU	278	Ambient Light Sensor Signal	II	—
11	—	—	—	Not Occupied	—	—
12	0.35	BN/D-BU	391	Rear Window Wiper Switch Signal	II	—
13	0.35	GY/RD	598	5V Reference	II	—
14	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	II	—
15	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	II	—
16	0.35	GY	3273	Remote Function Actuator Low Reference	II	—
17	0.35	D-BU/GN	5723	Ignition Mode Switch Mode Voltage	II	—
18	0.35	GN/WH	4047	Glove Box Door Release Signal	II	—
19	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	II	—
20	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—
21	0.5	GN/GY	6135	Local Interconnect Network Serial Data Bus 4	II	—
22 - 24	—	—	—	Not Occupied	—	—
25	0.35	GY/WH	3272	Remote Function Actuator Control	II	—
26	0.35	GN/WH	111	Hazard Switch Signal	II	—
27	0.35	YE/GN	3274	Remote Function Actuator Transmit Signal	II	—

K9 Body Control Module X4





Connector Part Information

Harness Type: Body

OEM Connector: 13962485

Service Connector: 13587579

Description: 26-Way F 0.64, 2.8 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

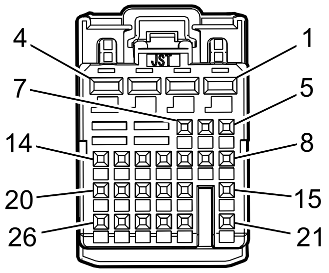
K9 Body Control Module X4

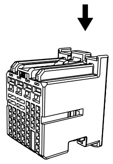
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	712	Left Headlamp Low Beam Control	I	—
2	0.75	YE	312	Right Headlamp Low Beam Control	I	—
3	0.75	GN/VT	1315	Right Front Turn Signal Lamp Control	I	—
4	0.5	BN/GN	19	Right Rear Stop/Turn Lamp Control	I	—
5	0.75	WH/YE	7541	Right Rear Stop Lamp Control	II	—
6	0.75	GY/YE	7542	Left Rear Stop Lamp Control	II	—
7	0.75	GY/D-BU	7538	Left Front DRL Control	II	—

8	0.35	GY/YE	6188	Lift Glass/Rear Compartment Lid Motor Release Control	II	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.5	VT/WH	5065	Stop Lamp Relay Coil Control	II	—
12	0.35	GY/VT	755	RAP Relay Coil Control	II	—
13	0.5	GN/YE	6846	Rear License Lamp Control	II	—
14	0.35	BN/GY	2268	Windshield Washer Relay Control	II	—
15	0.35	GN/VT	5199	Run/Crank Relay Coil Control	II	—
16	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	II	—
17	0.5	BN/GN	196	Windshield Wiper Motor Park Switch Signal	II	—
18	0.35	WH/YE	5075	Current Sensor Signal	II	—
19	0.35	D-BU/YE	6844	ABS/TCS Hill Descent Control Switch Signal	II	—
20	0.75	RD/YE	2340	Battery Positive Voltage	II	—
21	0.35	D-BU/VT	5076	Current Sensor Control	II	—
22	0.35	VT/YE	5985	Accessory Wakeup Serial Data	II	—
23	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
24	0.5	BN/GN	109	Hood Ajar Switch Signal	II	—
25	0.35	YE/D-BU	4086	Pushbutton Start Challenge Active Signal	II	—

26	0.75	BK/WH	451	Signal Ground	II	—

K9 Body Control Module X5





Connector Part Information

Harness Type: Body

OEM Connector: 13962299

Service Connector: 13587577

Description: 26-Way F 0.64, 2.8 Series (BN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

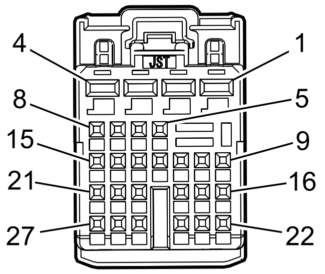
K9 Body Control Module X5

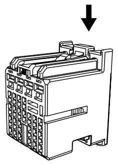
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/D-BU	18	Left Rear Stop/Turn Lamp Control	I	—
2	0.75	D-BU/WH	1314	Left Front Turn Signal Lamp Control	I	—
3	0.75	RD/GN	5140	Battery Positive Voltage	I	—
4	0.75	RD/WH	3440	Battery Positive Voltage	I	—
5	0.35	YE/VT	317	Fog Lamp Relay Coil Control	II	—
6	0.35	BK/VT	5077	Current Sensor Low Reference	II	—
7	0.75	D-BU/BN	7539	Right Front DRL Control	II	—

8	0.35	D-BU/WH	5186	Left Trailer Turn Signal Lamp Control	II	—
9	0.35	GN/WH	2270	Rear Window Washer Relay Control	II	—
10	0.5	BN	1317	Fog Lamp Relay Control	II	—
11	0.35	GN/BN	5706	Endgate Latch Relay Control	II	—
12	0.35	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
13	0.35	BN/YE	1970	Headlamp Low Beam Relay Control	II	—
14	0.5	VT/BN	300	Run Ignition 3 Voltage	II	—
15	—	—	—	Not Occupied	—	—
16	0.35	VT/YE	3267	Child Security Lock Relay Control	II	—
17	0.35	YE/GY	5187	Right Trailer Turn Signal Lamp Control	II	—
18	0.35	BN/VT	1969	Headlamp High Beam Relay Control	II	—
19	0.35	BN/WH	28	Horn Relay Control	II	—
20	0.35	YE	5704	Endgate Latch Relay Coil Control	II	—
21	—	—	—	Not Occupied	—	—
22	0.35	D-BU	45	Park Lamp Relay Control	II	—
23	0.35	YE	6812	Out of Park Signal	II	—
24	0.35	WH/VT	860	Front Windshield Wiper Switch High Signal	II	—
25	—	—	—	Not Occupied	—	—

25	—	—	—	Not Occupied	—	—
26	0.35	D-BU/BN	38	Backup Lamp Relay Control	II	—

K9 Body Control Module X6





Connector Part Information

Harness Type: Body

OEM Connector: 13962300

Service Connector: 13587576

Description: 27-Way F 0.64, 2.8 Series (L-PU)

Terminal Part Information

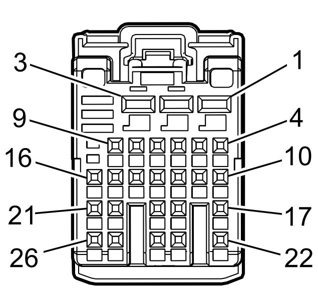
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	C	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
III	Not Required	No Tool Required	No Tool Required	Not Available	Not Available	Not Available	Not Available

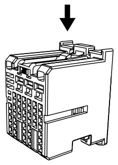
K9 Body Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	D-BU/WH	195	Door Lock Control	I	—
2	1.5	GY/GN	3271	Door Lock Control 2	I	—
3	1.5	BK	1850	Ground	I	—
4	1.5	BN/YE	294	Door Lock Actuator Unlock Control	I	—
5	0.35	VT/GY	1303	Lift Gate Ajar Switch Signal 1	II	—
6	0.5	WH/D-BU	3203	Right Headlamp Bulb Outage Signal	II	—
7	0.5	YE/WH	58	Right Cornering Lamp Control	II	—

8	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	II	—
9	0.5	GN/D-BU	6133	Local Interconnect Network Serial Data Bus 2	II	—
10	0.5	GN/YE	6134	Local Interconnect Network Serial Data Bus 3	II	—
11	—	—	—	Not Occupied	—	—
12	0.5	YE/BK	5356	Left Tail Lamp Outage Detection Signal	II	—
13	0.5	VT/BU	7598	Glass Breakage Sensor Signal 2	III	—
14	—	—	—	Not Occupied	—	—
15	0.35	GY/GN	6190	Lift Glass/Rear Compartment Lid Exterior Release Signal	II	—
16	0.5	GN/BN	6132	Local Interconnect Network Serial Data Bus 1	II	—
17	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	II	—
18 - 20	—	—	—	Not Occupied	—	—
21	0.5	D-BU/VT	3204	Left Headlamp Bulb Outage Signal	II	—
22	0.5	VT/YE	5357	Right Tail Lamp Outage Detection Signal	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
26	—	—	—	Not Occupied	—	—
27	0.35	WH/VT	2092	Fuel Saver Mode (ECO) Switch Signal	II	—

K9 Body Control Module X7





Connector Part Information

Harness Type: Body

OEM Connector: 13962301

Service Connector: 13587578

Description: 26-Way F 0.64, 2.8 Series (L-GY)

Terminal Part Information

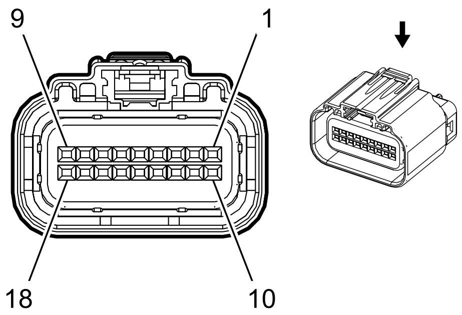
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575871	J-35616-35 (VT)	J-38125-12A	SNAC-A061T-M2.8	Delphi 20	E	A
II	13582297	J-35616-64B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

K9 Body Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	157	Interior Lamp Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH/BN	6815	Inadvertent Power Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	II	—
7	0.5	YE/GY	57	Left Cornering Lamp Control	II	—
8	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	II	—
9	0.5	YE	6817	LED Backlight Dimming Control	II	—

10	0.35	D-BU/BN	7547	Security Lock Relay Control	II	—
11	—	—	—	Not Occupied	—	—
12	0.35	BN/WH	3269	Child Security Lock Motor Status Signal Left Rear	II	—
13	0.35	GN/WH	1932	Shift Select Switch Park Signal	II	—
14	0.35	YE/D-BU	5797	Rear Closure Handle Switch Open Signal	II	—
15	0.35	YE/BN	3265	Child Security Lock Switch Signal	II	—
16	0.5	WH/D-BU	3691	Trailer Brake Apply Signal	II	—
17	—	—	—	Not Occupied	—	—
18	0.35	GY/BK	3268	Child Security Lock Motor Status Signal Right Rear	II	—
19	0.35	GY	156	Courtesy Lamp Switch Signal	II	—
20	—	—	—	Not Occupied	—	—
21	0.35	YE/VT	244	Passenger Door Lock Switch Lock Control	II	—
22	0.35	WH/YE	7557	LED Ambient Lighting Control 1	II	—
23	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
24	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	II	—
25	0.35	GN	4512	Wireless Charging System Charge Indicator Control	II	—
26	—	—	—	Not Occupied	—	—

K14 Distance Sensing Cruise Control Module



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33144472

Service Connector: 19331591

Description: 18-Way F 0.64 GET Series, Sealed (BK)

Terminal Part Information

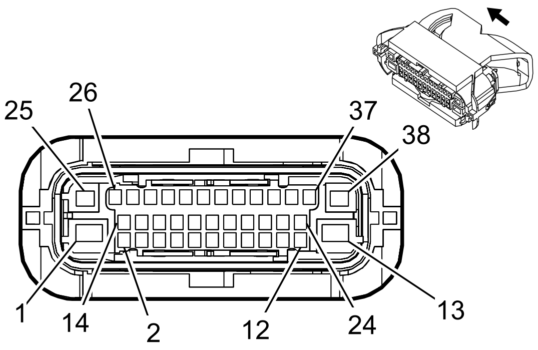
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579977	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

K14 Distance Sensing Cruise Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GN	3140	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	150	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
6	0.5	D-BU	6105	High Speed GMLAN Serial Data (+) 2	I	—
7	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
8	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
9	—	—	—	Not Occupied	—	—

10	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—
11 - 18	—	—	—	Not Occupied	—	—

K17 Electronic Brake Control Module (L96)



Connector Part Information

Harness Type: Chassis

OEM Connector: 13655518

Service Connector: 19303771

Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK with BN Inner Connector)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575368	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
II	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19119560	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available
IV	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

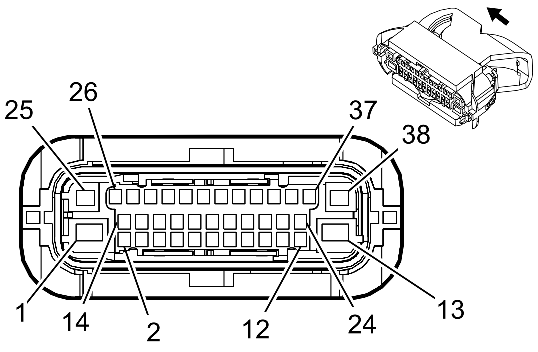
K17 Electronic Brake Control Module (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD/YE	442	Battery Positive Voltage	III	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	II	—
4	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	II	—
5	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
7	—	—	—	Not Occupied	—	—

8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
9	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
10	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	II	—
11	0.5	YE	872	Wheel Speed Sensor Signal Right Front	II	—
12	—	—	—	Not Occupied	—	—
13	5	BK	2150	Ground	III	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	IV	—
18	0.5	GN/GY	333	Brake Fluid Level Sensor Signal	II	—
19	—	—	—	Not Occupied	—	—
20	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
21	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
22 - 24	—	—	—	Not Occupied	—	—
25	2.5	RD/VT	1640	Battery Positive Voltage	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
29	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	II	—
30	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	II	—
31 - 32	—	—	—	Not Occupied	—	—

33	0.5	GN/GY	817	Vehicle Speed Signal	II	—
34	—	—	—	Not Occupied	—	—
35	0.5	GY/GN	7064	Wheel Speed Sensor Control Left Front	II	—
36	0.5	GY	830	Wheel Speed Sensor Signal Left Front	II	—
37	—	—	—	Not Occupied	—	—
38	2.5	BK	2150	Ground	I	—

K17 Electronic Brake Control Module (-L96)



Connector Part Information

Harness Type: Chassis

OEM Connector: 15533085

Service Connector: 19303771

Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575368	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
II	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19119560	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available
IV	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

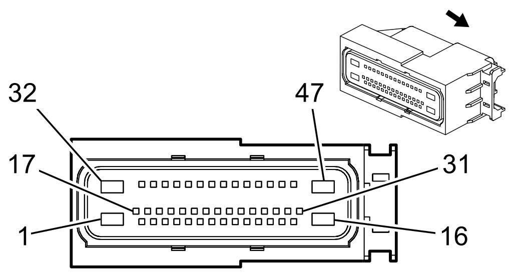
K17 Electronic Brake Control Module (-L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	RD/YE	442	Battery Positive Voltage	III	—
2	0.5	BK/BN	6045	Steering Angle Sensor Low Reference	IV	—
3	0.5	GY/YE	7128	Wheel Speed Sensor Control Right Rear	II	—
4	0.5	VT	882	Wheel Speed Sensor Signal Right Rear	II	—
5	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
7	—	—	—	Not Occupied	—	—

7	—	—	—	Not Occupied	—	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
9	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
10	0.5	GY/BN	7065	Wheel Speed Sensor Control Right Front	II	—
11	0.5	YE	872	Wheel Speed Sensor Signal Right Front	II	—
12	—	—	—	Not Occupied	—	—
13	5	BK	2150	Ground	III	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	GN/BN	2087	Combined Vehicle Inertial Sensor Supply Voltage	IV	—
18	0.5	GN/GY	333	Brake Fluid Level Sensor Signal	II	—
19	—	—	—	Not Occupied	—	—
20	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
21	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
22 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/YE	6032	Brake Vacuum Sensor Low Reference	II	—
25	2.5	RD/VT	1640	Battery Positive Voltage	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH/D-BU	5986	Serial Data Communication Enable	II	—
29	0.5	GY/BK	7127	Wheel Speed Sensor Control Left Rear	II	—

30	0.5	D-BU	884	Wheel Speed Sensor Signal Left Rear	II	—
31	—	—	—	Not Occupied	—	—
32	0.5	YE/RD	6031	Brake Vacuum Sensor 5V Reference	II	—
33	0.5	GN/WH	817	Vehicle Speed Signal	II	—
34	0.5	YE/VT	6030	Brake Vacuum Sensor Signal	II	—
35	0.5	GY/GN	7064	Wheel Speed Sensor Control Left Front	II	—
36	0.5	GY	830	Wheel Speed Sensor Signal Left Front	II	—
37	—	—	—	Not Occupied	—	—
38	2.5	BK	2150	Ground	I	—

K19 Suspension Control Module



Connector Part Information

Harness Type: Chassis

OEM Connector: 15491307

Service Connector: 89047377

Description: 47-Way F 0.64, 6.3 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578883	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13579754	J-35616-42 (RD)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	13579755	J-35616-42 (RD)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	13579766	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K19 Suspension Control Module

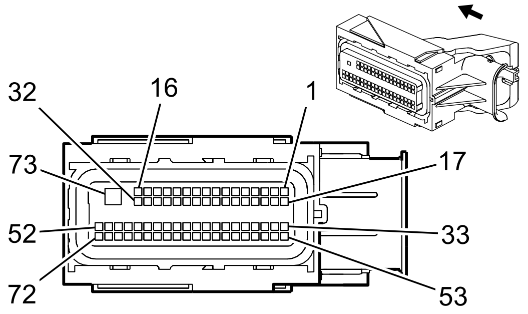
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	BK/GN	1209	Left Rear Strut Position Sensor Low Reference	I	—
3	0.5	YE/WH	1213	Right Front Strut Position Sensor Signal	I	—
4	0.5	BK/YE	6077	Real Time Damping Air Pressure Sensor Low Reference	I	—
5	0.5	BK/YE	1215	Right Rear Strut Position Sensor Low Reference	I	—
6	0.5	BN/WH	1207	Left Front Strut Position Sensor Signal	I	—
7	0.5	YE/GN	6075	Real Time Damping Air Pressure Sensor Signal	I	—

8 - 11	—	—	—	Not Occupied	—	—
12	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
13	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
14	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
15	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
16	0.75	WH/D-BU	5986	Serial Data Communication Enable	II	—
17	0.5	GN/WH	1210	Left Rear Strut Position Sensor Signal	I	—
18	0.5	BK/GY	1212	Right Front Strut Position Sensor Low Reference	I	—
19	—	—	—	Not Occupied	—	—
20	0.5	GN/GY	1216	Right Rear Strut Position Sensor Signal	I	—
21	0.5	BK/D-BU	1206	Left Front Strut Position Sensor Low Reference	I	—
22	0.75	WH/GN	320	Automatic Level Control Exhaust Solenoid Control	IV	—
23	0.5	D-BU/RD	6076	Real Time Damping Air Pressure Sensor 5V Reference	I	—
24	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
25	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
26	0.5	VT/D-BU	5956	Leveling Compressor Relay Coil Control	I	—
27	0.75	BN	1009	Right Front Strut Motor Decrease Damping Control	IV	—

28	0.75	WH/BK	1006	Right Front Strut Motor Increase Damping Control	IV	—
29	—	—	—	Not Occupied	—	—
30	0.75	WH/GN	1005	Left Front Strut Motor Decrease Damping Control	IV	—
31	0.75	WH/GY	1448	Left Front Strut Motor Increase Damping Control	IV	—
32	3	RD/GN	2440	Battery Positive Voltage	II	—
33	0.5	YE/RD	1208	Left Rear Strut Position Sensor 5V Reference	I	—
34	0.5	BN/RD	1211	Right Front Strut Position Sensor 5V Reference	I	—
35	0.5	GN/RD	1214	Right Rear Strut Position Sensor 5V Reference	I	—
36	0.5	D-BU/RD	1205	Left Front Strut Position Sensor 5V Reference	I	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
40	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
41	0.75	WH/D-BU	3261	Automatic Level Control Exhaust Solenoid Control	IV	—
42	0.75	WH/BK	1013	Left Rear Strut Motor Decrease Damping Control	IV	—
43	0.75	BN/VT	1010	Left Rear Strut Motor Increase Damping Control	IV	—
44	—	—	—	Not Occupied	—	—
45	0.75	VT	1017	Right Rear Strut Motor Decrease Damping Control	IV	—

46	0.75	YE	1014	Right Rear Strut Motor Increase Damping Control	IV	—
47	4	BK	1750	Ground	III	—

K20 Engine Control Module X1 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820453

Service Connector: 19260919

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X1 ((L83/L86)+MYC)

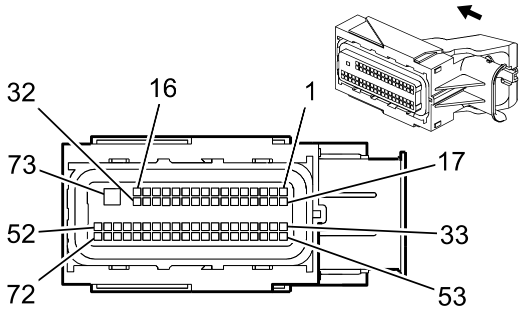
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	D-BU/WH	7446	Fuel Line Pressure Sensor Signal	II	—
3	—	—	—	Not Occupied	—	—
4	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	II	—
5	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	II	—
6	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	II	—
7	0.5	YE	5530	Hood Open Switch Signal	II	—
8	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	II	—

9	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	II	—
10	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	II	—
14	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	II	—
15	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	II	—
16 - 20	—	—	—	Not Occupied	—	—
21	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	II	—
22	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	II	—
25	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	II	—
26	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	II	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	II	—
31	—	—	—	Not Occupied	—	—
32	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	II	—
33	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	II	—
34	0.5	GN/WH	1162	Accelerator Pedal Position Signal 2	II	—

35	—	—	—	Not Occupied	—	—
36	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	II	—
37	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	II	—
38	0.5	WH	1579	Fuel Temperature/Composition Signal	II	—
39	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
40	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
41	0.5	D-BU/WH	2918	Fuel Rail Pressure Sensor Signal	II	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	—
45	—	—	—	Not Occupied	—	—
46	0.5	BN/WH	419	Check Engine Indicator Control	II	—
47	0.5	WH	5359	Brake Apply Sensor Control	II	—
48	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	II	—
49 - 50	—	—	—	Not Occupied	—	—
51	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
52	0.5	RD/BN	440	Battery Positive Voltage	II	—
53	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	II	—
54	0.5	GN/VT	4621	Local Interconnect Network Serial Data Bus 21	II	—

55 - 56	—	—	—	Not Occupied	—	—
57	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
58	—	—	—	Not Occupied	—	—
59	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	II	—
60 - 61	—	—	—	Not Occupied	—	—
62	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	—
63	0.5	YE/BK	625	Starter Enable Relay Control	II	—
64 - 65	—	—	—	Not Occupied	—	—
66	0.5	WH	1310	EVAP Canister Vent Solenoid Control	II	—
67	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	—
68	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	II	—
69	—	—	—	Not Occupied	—	—
70	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
71	—	—	—	Not Occupied	—	—
72	0.5	YE	5991	Powertrain Relay Coil Control	II	—
73	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—

K20 Engine Control Module X1 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820453

Service Connector: 19260919

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X1 (L86+M5U)

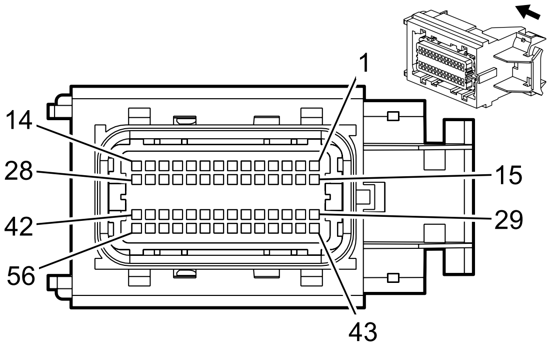
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	D-BU/WH	7446	Fuel Line Pressure Sensor Signal	II	—
3	—	—	—	Not Occupied	—	—
4	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	II	—
5	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	II	—
6	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	II	—
7	0.5	YE	5530	Hood Open Switch Signal	II	—
8	0.5	BK/YE	7447	Fuel Line Pressure Sensor Low Reference	II	—

9	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	II	—
10	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	II	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	II	—
14	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	II	—
15	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	II	—
16 - 20	—	—	—	Not Occupied	—	—
21	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	II	—
22	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	BN/RD	7445	Fuel Line Pressure Sensor 5V Reference	II	—
25	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	II	—
26	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	II	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	II	—
31	—	—	—	Not Occupied	—	—
32	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	II	—
33	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	II	—
34	0.5	GN/WH	1162	Accelerator Pedal Position Signal 2	II	—

35	—	—	—	Not Occupied	—	—
36	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	II	—
37	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	II	—
38	0.5	WH	1579	Fuel Temperature/Composition Signal	II	—
39	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
40	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
41	0.5	D-BU/WH	2918	Fuel Rail Pressure Sensor Signal	II	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	—
45	—	—	—	Not Occupied	—	—
46	0.5	BN/WH	419	Check Engine Indicator Control	II	—
47	0.5	WH	5359	Brake Apply Sensor Control	II	—
48	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	II	—
49 - 50	—	—	—	Not Occupied	—	—
51	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
52	0.5	RD/BN	440	Battery Positive Voltage	II	—
53	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	II	—
54	0.5	GN/VT	4621	Local Interconnect Network Serial Data Bus 21	II	—

55 - 56	—	—	—	Not Occupied	—	—
57	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	II	—
58	—	—	—	Not Occupied	—	—
59	0.5	BN/YE	473	High Speed Cooling Fan Relay Control	II	—
60 - 61	—	—	—	Not Occupied	—	—
62	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	II	—
63	0.5	YE/BK	625	Starter Enable Relay Control	II	—
64 - 65	—	—	—	Not Occupied	—	—
66	0.5	WH	1310	EVAP Canister Vent Solenoid Control	II	—
67	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	II	—
68	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	II	—
69	—	—	—	Not Occupied	—	—
70	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
71	—	—	—	Not Occupied	—	—
72	0.5	YE	5991	Powertrain Relay Coil Control	II	—
73	2.5	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—

K20 Engine Control Module X1 (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820449

Service Connector: 19329930

Description: 56-Way F 0.64 I Series, Sealed (BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

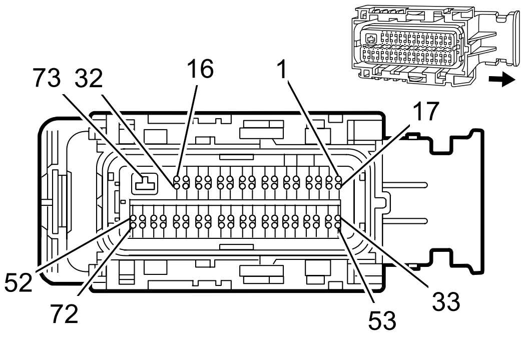
K20 Engine Control Module X1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	GN/WH	1162	Accelerator Pedal Position Signal 2	I	—
3	0.5	GN/WH	492	Mass Air Flow Sensor Signal	I	—
4 - 7	—	—	—	Not Occupied	—	—
8	0.5	GY/D-BU	7564	Humidity Sensor Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	YE/WH	1161	Accelerator Pedal Position Signal 1	I	—
11	0.5	YE/WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
12	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	I	—

13	0.5	BK/BN	5514	A/C Refrigerant Pressure Sensor Low Reference	I	—
14	0.5	YE/D-BU	1465	Secondary Fuel Pump Relay Control	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	BN/RD	1274	Accelerator Pedal Position 5V Reference 2	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
19	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	I	—
20	0.5	RD/BN	440	Battery Positive Voltage	I	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.5	WH/RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
25	0.5	WH/RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
26	0.5	BN/RD	2700	A/C Pressure Sensor 5V Reference	I	—
27	0.5	YE/BK	625	Starter Enable Relay Control	I	—
28	0.5	GN/GY	465	Fuel Pump Primary Relay Control	I	—
29	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
30	0.5	BK/VT	1272	Accelerator Pedal Position Low Reference 2	I	—
31	0.5	BK/VT	2760	Intake Air Temperature Sensor Low Reference	I	—
32	—	—	—	Not Occupied	—	—

33	0.5	WH/D-BU	6311	Cruise/ETC/TCC Brake Signal	I	—
34	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
35 - 37	—	—	—	Not Occupied	—	—
38	0.5	BK/D-BU	1271	Accelerator Pedal Position Low Reference 1	I	—
39	—	—	—	Not Occupied	—	—
40	0.5	YE	5991	Powertrain Relay Coil Control	I	—
41	0.75	BN/YE	473	High Speed Cooling Fan Relay Control	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
44	—	—	—	Not Occupied	—	—
45	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	BN	25	Charge Indicator Control	I	—
48 - 51	—	—	—	Not Occupied	—	—
52	0.5	BN/WH	419	Check Engine Indicator Control	I	—
53	0.5	WH/GY	459	A/C Compressor Clutch Relay Control	I	—
54 - 55	—	—	—	Not Occupied	—	—
56	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—

K20 Engine Control Module X2 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820450

Service Connector: 19301191

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X2 ((L83/L86)+MYC)

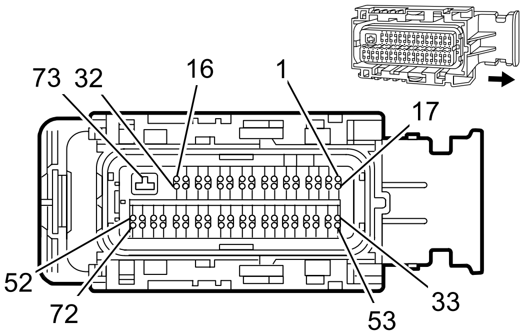
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK/GN	2919	Fuel Rail Pressure Sensor Low Reference	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	VT/WH	821	Vehicle Speed Sensor Signal	II	—
7	0.5	BK/GN	822	Vehicle Speed Sensor Low Reference	II	—
8	0.5	BN/WH	6354	Output Speed High (Replicated TOS) Input Signal	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	II	—
11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	II	—

12	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	II	—
13	0.5	VT/GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	II	—
14	—	—	—	Not Occupied	—	—
15	0.5	GY/D-BU	7564	Humidity Sensor Signal	II	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	II	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	II	—
19 - 25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	II	—
27	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	II	—
28	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	II	—
29	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	II	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	YE	581	Throttle Actuator Control Open	II	—
33	—	—	—	Not Occupied	—	—
34	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	II	—
35	—	—	—	Not Occupied	—	—
36	0.75	VT/GY	496	Knock Sensor Signal 1	II	—
37	0.75	WH/GY	1876	Knock Sensor Signal 2	II	—

38 - 39	—	—	—	Not Occupied	—	—
40	0.5	VT/D-BU	6091	Crankshaft Position Sensor Replicated Signal	II	—
41	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	II	—
42	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	II	—
43	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	II	—
44	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	II	—
45	—	—	—	Not Occupied	—	—
46	0.5	GY/BN	2410	—	II	—
47 - 48	—	—	—	Not Occupied	—	—
49	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	II	—
50	—	—	—	Not Occupied	—	—
51	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	II	—
52	0.5	GN/WH	492	Mass Air Flow Sensor Signal	II	—
53	0.5	BN	25	Charge Indicator Control	II	—
54	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	II	—
55	0.5	GY	23	Generator Field Duty Cycle Signal	II	—
56	0.75	BK/YE	1716	Knock Sensor Low Reference 1	II	—
57	0.75	BK/GY	2303	Knock Sensor Low Reference 2	II	—

58	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	II	—
59	0.5	D-BU	179	Oil Pump Command Signal	II	—
60	0.5	BN/GN	1174	Oil Level Switch Signal	II	—
61	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	II	—
62	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	II	—
63	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	II	—
64	—	—	—	Not Occupied	—	—
65	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	II	—
66 - 68	—	—	—	Not Occupied	—	—
69	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	II	—
70	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	II	—
71 - 72	—	—	—	Not Occupied	—	—
73	2.5	BK/WH	451	Signal Ground	I	—

K20 Engine Control Module X2 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820450

Service Connector: 19301191

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X2 (L86+M5U)

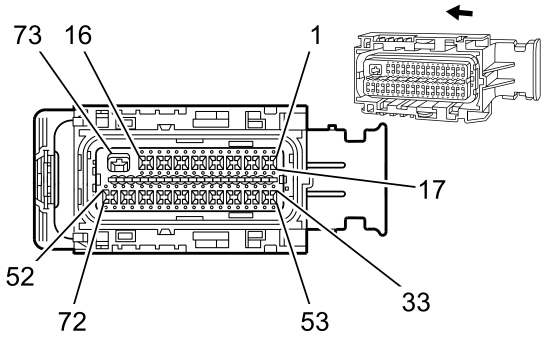
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK/GN	2919	Fuel Rail Pressure Sensor Low Reference	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	VT/WH	821	Vehicle Speed Sensor Signal	II	—
7	0.5	BK/GN	822	Vehicle Speed Sensor Low Reference	II	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	II	—
11	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	II	—
12	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	II	—

13	0.5	VT/GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	II	—
14	—	—	—	Not Occupied	—	—
15	0.5	GY/D-BU	7564	Humidity Sensor Signal	II	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	II	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN/RD	2917	Fuel Rail Pressure Sensor 5V Reference	II	—
19 - 25	—	—	—	Not Occupied	—	—
26	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	II	—
27	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	II	—
28	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	II	—
29	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	II	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	YE	581	Throttle Actuator Control Open	II	—
33	—	—	—	Not Occupied	—	—
34	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	II	—
35	—	—	—	Not Occupied	—	—
36	0.75	VT/GY	496	Knock Sensor Signal 1	II	—
37	0.75	WH/GY	1876	Knock Sensor Signal 2	II	—
38 - 39	—	—	—	Not Occupied	—	—

40	0.5	VT/D-BU	6091	Crankshaft Position Sensor Replicated Signal	II	—
41	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	II	—
42	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	II	—
43	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	II	—
44	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	II	—
45	—	—	—	Not Occupied	—	—
46	0.5	GY/BN	2410	—	II	—
47 - 48	—	—	—	Not Occupied	—	—
49	0.5	WH/D-BU	6289	Induction Air Temperature Sensor Signal	II	—
50	—	—	—	Not Occupied	—	—
51	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	II	—
52	0.5	GN/WH	492	Mass Air Flow Sensor Signal	II	—
53	0.5	BN	25	Charge Indicator Control	II	—
54	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	II	—
55	0.5	GY	23	Generator Field Duty Cycle Signal	II	—
56	0.75	BK/YE	1716	Knock Sensor Low Reference 1	II	—
57	0.75	BK/GY	2303	Knock Sensor Low Reference 2	II	—
58	—	—	—	Not Occupied	—	—

59	0.5	D-BU	179	Oil Pump Command Signal	II	—
60	0.5	BN/GN	1174	Oil Level Switch Signal	II	—
61	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	II	—
62	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	II	—
63	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	II	—
64	—	—	—	Not Occupied	—	—
65	0.5	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	II	—
66	—	—	—	Not Occupied	—	—
67	0.5	VT/WH	6319	ETRS Out of Park Switch 2 Signal	II	—
68	—	—	—	Not Occupied	—	—
69	0.5	WH/YE	3202	Throttle Inlet Absolute Pressure Sensor Low Reference	II	—
70	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	II	—
71 - 72	—	—	—	Not Occupied	—	—
73	2.5	BK/WH	451	Signal Ground	I	—

K20 Engine Control Module X2 (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 33152986

Service Connector: 19301191

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available
II	13579770	J-35616-35 (VT)	J-38125-11A	7116-4152-02	Yazaki 9	A	5

K20 Engine Control Module X2 (L96)

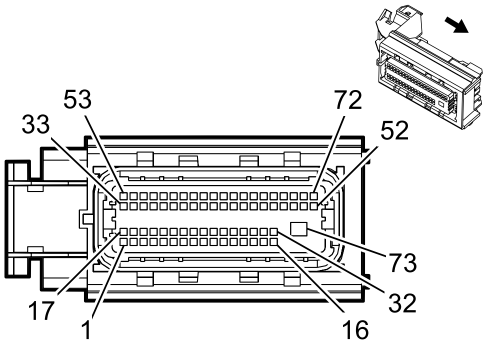
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/VT	2121	Ignition Control 1	I	—
2	0.5	GN/YE	1744	Fuel Injector Control 1	I	—
3	0.5	BN/GY	878	Fuel Injector Control 8	I	—
4	0.5	BN/VT	877	Fuel Injector Control 7	I	—
5	0.5	YE/WH	1745	Fuel Injector Control 2	I	—
6	0.5	BN/D-BU	846	Fuel Injector Control 6	I	—
7	0.5	BN/GN	845	Fuel Injector Control 5	I	—

8	0.5	BN/YE	844	Fuel Injector Control 4	I	—
9	0.5	BN/VT	1746	Fuel Injector Control 3	I	—
10	—	—	—	Not Occupied	—	—
11	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	I	—
12 - 14	—	—	—	Not Occupied	—	—
15	0.5	YE	581	Throttle Actuator Control Open	I	—
16	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
17	0.5	VT/WH	2128	Ignition Control 8	I	—
18	0.5	YE/D-BU	2124	Ignition Control 4	I	—
19	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
20	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	I	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	I	—
25	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.75	VT/D-BU	5290	Powertrain Main Relay Fused Supply 1	I	—
29	0.5	BK/BN	6753	Cam Phaser W Low Reference	I	—
30 - 32	—	—	—	Not Occupied	—	—
33	0.5	GN/GY	2127	Ignition Control 7	I	—

34	0.5	D-BU/GY	2125	Ignition Control 5	I	—
35	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
36	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	I	—
37 - 39	—	—	—	Not Occupied	—	—
40	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	I	—
41	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	I	—
42	—	—	—	Not Occupied	—	—
43	0.5	BN/YE	2701	Throttle Position Sensor 5V Reference	I	—
44	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
45	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	WH/BK	3111	Heated Oxygen Sensor Low Signal Bank 1 Sensor 1	I	—
48	0.5	YE/WH	3211	Heated Oxygen Sensor Low Signal Bank 2 Sensor 1	I	—
49	0.75	BK/YE	1716	Knock Sensor Low Reference 1	I	—
50	0.75	BK/GY	2303	Knock Sensor Low Reference 2	I	—
51	—	—	—	Not Occupied	—	—
52	0.5	GN/YE	3212	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 1	I	—
53	0.5	D-BU/WH	2122	Ignition Control 2	I	—

54	0.5	BN/D-BU	2126	Ignition Control 6	I	—
55	0.5	GN/D-BU	2123	Ignition Control 3	I	—
56	0.5	GN	6271	Crankshaft 60X Sensor Signal	I	—
57 - 59	—	—	—	Not Occupied	—	—
60	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	I	—
61	0.5	YE/BN	331	Oil Pressure Sensor Signal	I	—
62 - 66	—	—	—	Not Occupied	—	—
67	0.5	VT/GY	3110	Heated Oxygen Sensor High Signal Bank 1 Sensor 1	I	—
68	0.5	VT/WH	3210	Heated Oxygen Sensor High Signal Bank 2 Sensor 1	I	—
69	0.75	VT/GY	496	Knock Sensor Signal 1	I	—
70	0.75	WH/GY	1876	Knock Sensor Signal 2	I	—
71	—	—	—	Not Occupied	—	—
72	0.5	GY/WH	3113	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 1	I	—
73	2.5	BK/WH	451	Signal Ground	II	—

K20 Engine Control Module X3 ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 33157045

Service Connector: 19260918

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X3 ((L83/L86)+MYC)

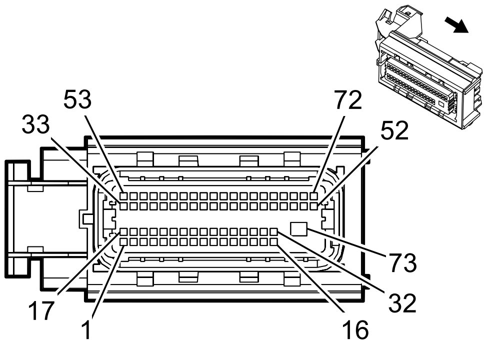
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	II	—
2	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	II	—
3 - 7	—	—	—	Not Occupied	—	—
8	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	II	—
11	0.5	GN/D-BU	2123	Ignition Control 3	II	—
12	0.5	YE/D-BU	2124	Ignition Control 4	II	—

13	0.5	D-BU/GY	2125	Ignition Control 5	II	—
14	0.5	BN/D-BU	2126	Ignition Control 6	II	—
15	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	II	—
16	0.75	YE	7301	High Pressure Fuel Pump Actuator High - Control	II	—
17	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	II	—
18 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	II	—
25	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	II	—
26	0.5	GN	6271	Crankshaft 60X Sensor Signal	II	—
27	0.5	D-BU/WH	2122	Ignition Control 2	II	—
28	0.5	GN/GY	2127	Ignition Control 7	II	—
29	0.5	VT/WH	2128	Ignition Control 8	II	—
30	0.5	D-BU/VT	2121	Ignition Control 1	II	—
31	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	II	—
32	0.75	VT/BK	7300	High Pressure Fuel Pump Actuator Low - Control	II	—
33	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	II	—
34	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	II	—

35 - 38	—	—	—	Not Occupied	—	—
39	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	II	—
40 - 42	—	—	—	Not Occupied	—	—
43	0.5	GY	5493	Cylinder Shutoff Solenoid Control 3	II	—
44	0.5	YE/D-BU	5494	Cylinder Shutoff Solenoid Control 4	II	—
45	0.75	GY/D-BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	II	—
46	0.75	D-BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	II	—
47	0.75	GN/VT	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	II	—
48	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	II	—
49	0.75	GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	II	—
50	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	II	—
51	0.75	WH/GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	II	—
52	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	II	—
53	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	II	—
54 - 58	—	—	—	Not Occupied	—	—
59	0.5	BK/BN	6753	Cam Phaser W Low Reference	II	—
60 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU	5491	Cylinder Shutoff Solenoid Control 1	II	—

64	0.5	GN	5492	Cylinder Shutoff Solenoid Control 2	II	—
65	0.75	D-BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	II	—
66	0.75	BN/GN	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	II	—
67	0.75	VT	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	II	—
68	0.75	WH/GN	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	II	—
69	0.75	GN/BK	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	II	—
70	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	II	—
71	0.75	GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	II	—
72	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	II	—
73	2.5	BK/WH	451	Signal Ground	I	—

K20 Engine Control Module X3 (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13820451

Service Connector: 19260918

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	4	D
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

K20 Engine Control Module X3 (L86+M5U)

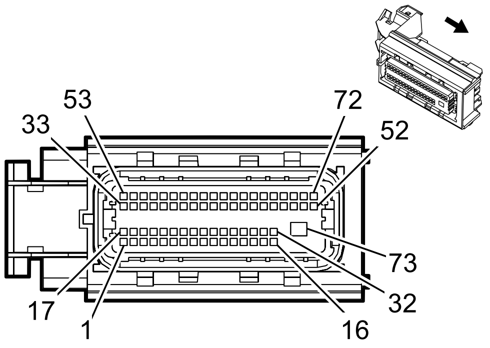
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	331	Oil Pressure Sensor Signal	II	—
2	0.5	WH/RD	2705	Oil Pressure Sensor 5V Reference	II	—
3 - 7	—	—	—	Not Occupied	—	—
8	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT/D-BU	6270	Crankshaft 60X Sensor 5V Reference	II	—
11	0.5	GN/D-BU	2123	Ignition Control 3	II	—
12	0.5	YE/D-BU	2124	Ignition Control 4	II	—

13	0.5	D-BU/GY	2125	Ignition Control 5	II	—
14	0.5	BN/D-BU	2126	Ignition Control 6	II	—
15	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	II	—
16	0.75	YE	7301	High Pressure Fuel Pump Actuator High - Control	II	—
17	0.5	BK/VT	2755	Oil Pressure Sensor Low Reference	II	—
18	0.5	GN/GY	6387	Transmission High Side Driver 1 Signal Driver	II	—
19	0.5	BK/GY	3927	IMS Mode Switch Low Reference	II	—
20 - 23	—	—	—	Not Occupied	—	—
24	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	II	—
25	0.5	BK/VT	6272	Crankshaft 60X Sensor Low Reference	II	—
26	0.5	GN	6271	Crankshaft 60X Sensor Signal	II	—
27	0.5	D-BU/WH	2122	Ignition Control 2	II	—
28	0.5	GN/GY	2127	Ignition Control 7	II	—
29	0.5	VT/WH	2128	Ignition Control 8	II	—
30	0.5	D-BU/VT	2121	Ignition Control 1	II	—
31	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	II	—
32	0.75	VT/BK	7300	High Pressure Fuel Pump Actuator Low - Control	II	—

33	0.5	YE/VT	5275	Camshaft Position Intake Sensor 1	II	—
34	0.5	GY/D-BU	5300	Camshaft Position Intake Sensor Control 1	II	—
35 - 38	—	—	—	Not Occupied	—	—
39	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	II	—
40 - 42	—	—	—	Not Occupied	—	—
43	0.5	GY	5493	Cylinder Shutoff Solenoid Control 3	II	—
44	0.5	YE/D-BU	5494	Cylinder Shutoff Solenoid Control 4	II	—
45	0.75	GY/D-BU	4804	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	II	—
46	0.75	D-BU	4802	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	II	—
47	0.75	GN/VT	4806	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	II	—
48	0.75	GY	4808	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	II	—
49	0.75	GN	4803	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	II	—
50	0.75	YE/GY	4807	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	II	—
51	0.75	WH/GN	4805	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	II	—
52	0.75	BN	4801	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	II	—
53	0.5	BK/GN	5301	Camshaft Position Intake Sensor Low Reference 1	II	—
54 - 58	—	—	—	Not Occupied	—	—

59	0.5	BK/BN	6753	Cam Phaser W Low Reference	II	—
60 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU	5491	Cylinder Shutoff Solenoid Control 1	II	—
64	0.5	GN	5492	Cylinder Shutoff Solenoid Control 2	II	—
65	0.75	D-BU/WH	4904	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	II	—
66	0.75	BN/GN	4902	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	II	—
67	0.75	VT	4906	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	II	—
68	0.75	WH/GN	4908	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	II	—
69	0.75	GN/BK	4903	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	II	—
70	0.75	WH/YE	4907	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	II	—
71	0.75	GN/WH	4905	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	II	—
72	0.75	BN/WH	4901	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	II	—
73	2.5	BK/WH	451	Signal Ground	I	—

K20 Engine Control Module X3 (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 33157048

Service Connector: 19260918

Description: 73-Way F 0.64, 2.8 Series, Sealed (BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

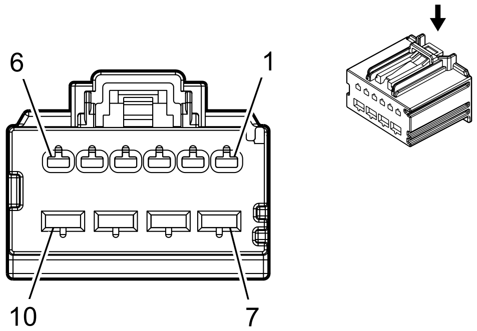
K20 Engine Control Module X3 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 9	—	—	—	Not Occupied	—	—
10	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—
11 - 15	—	—	—	Not Occupied	—	—
16	0.5	WH/BN	3223	Heated Oxygen Sensor Heater Low Control Bank 2 Sensor 2	I	—
17	0.5	GY	23	Generator Field Duty Cycle Signal	I	—
18 - 21	—	—	—	Not Occupied	—	—
22	0.5	BK/BN	5360	Brake Apply Sensor Low Reference	I	—
23 - 26	—	—	—	Not Occupied	—	—
27	0.5	BK/GN	6281	Fuel Level Sensor Low Reference	I	—
28	0.5	GY/RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—

29	0.5	BK/GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
30	0.5	BK/BN	2761	Coolant Temperature Sensor Low Reference	I	—
31	—	—	—	Not Occupied	—	—
32	0.5	GY/WH	3122	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	I	—
33 - 37	—	—	—	Not Occupied	—	—
38	0.5	WH	5359	Brake Apply Sensor Control	I	—
39 - 42	—	—	—	Not Occupied	—	—
43	0.5	YE/RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—
44	0.5	D-BU/WH	1937	Secondary Fuel Level Sensor Signal	I	—
45	0.5	GN/WH	432	Manifold Absolute Pressure Sensor Signal	I	—
46	0.5	D-BU	410	Engine Coolant Temperature Sensor Signal	I	—
47	—	—	—	Not Occupied	—	—
48	0.5	VT/WH	821	Vehicle Speed Sensor Signal	I	—
49	0.5	BK/GN	822	Vehicle Speed Sensor Low Reference	I	—
50 - 57	—	—	—	Not Occupied	—	—
58	0.5	D-BU/YE	5361	Brake Apply Sensor Signal	I	—
59 - 62	—	—	—	Not Occupied	—	—
63	0.5	D-BU/WH	890	Fuel Tank Pressure Sensor Signal	I	—
64	0.5	D-BU/VT	1589	Primary Fuel Level Sensor Signal	I	—

65	0.5	VT/GN	3220	Heated Oxygen Sensor High Signal Bank 2 Sensor 2	I	—
66	0.5	YE/D-BU	3221	Heated Oxygen Sensor Low Signal Bank 2 Sensor 2	I	—
67	0.5	VT/D-BU	3120	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	I	—
68	0.5	WH/YE	3121	Heated Oxygen Sensor Low Signal Bank 1 Sensor 2	I	—
69 - 73	—	—	—	Not Occupied	—	—

K29R Seat Heating Control Module - Rear X1 (X88/Z88+KA6)



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 13582823

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (BK)

Terminal Part Information

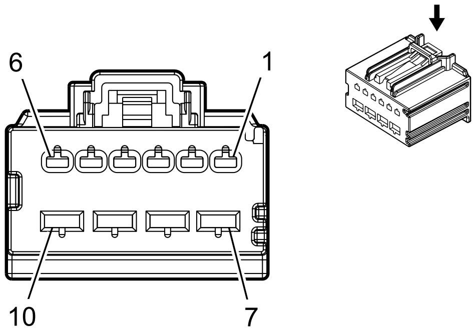
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K29R Seat Heating Control Module - Rear X1 (X88/Z88+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—
2	0.75	GN/BN	2296	Right Rear Heated Seat Cushion Element Control	I	—
3	0.75	GN/BK	2297	Right Rear Heated Seat Cushion Element Low Reference	I	—
4	0.75	BN/BK	2295	Left Rear Heated Seat Cushion Element Low Reference	I	—
5	—	—	—	—	I	—
6	0.75	GY	2294	Left Rear Heated Seat Cushion Element Control	I	—
7	0.75	RD/GN	6140	Battery Positive Voltage	I	—
8	0.75	BK	1150	Ground	I	—

9	—	—	—	—	I	—
10	0.75	RD/GN	5140	Battery Positive Voltage	I	—

K29R Seat Heating Control Module - Rear X1 (Z75+KB6)



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 31372-1000

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (BK)

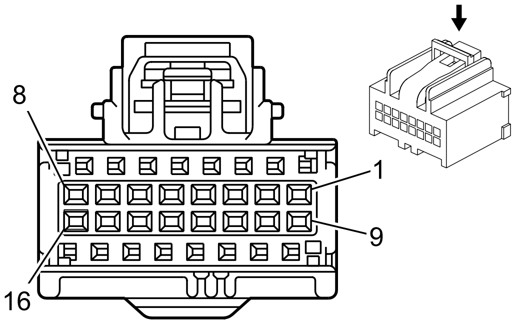
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29R Seat Heating Control Module - Rear X1 (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6140	Battery Positive Voltage	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.75	GN/BN	2296	Right Rear Heated Seat Cushion Element Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	GY	2294	Left Rear Heated Seat Cushion Element Control	I	—
7	—	—	—	Not Occupied	—	—
8	0.75	BK	1150	Ground	II	—
9	—	—	—	Not Occupied	—	—
10	0.75	RD/GN	5140	Battery Positive Voltage	II	—

K29R Seat Heating Control Module - Rear X2 (X88/Z88+KA6)



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 15136073

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

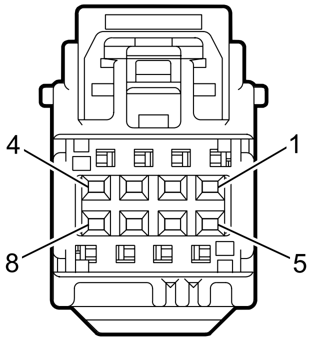
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

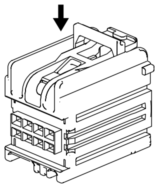
K29R Seat Heating Control Module - Rear X2 (X88/Z88+KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU/WH	7048	Left Rear Cushion NTC Low Reference	I	—
2	0.75	WH/BK	7054	Right Rear Cushion NTC Low Reference	I	—
3	—	—	—	—	I	—
4	—	—	—	—	I	—
5	—	—	—	—	I	—
6	0.75	WH/BU	7047	Left Rear Cushion NTC Signal	I	—
7	0.35	BK	1150	Ground	I	—
8	0.5	GN/BU	6133	Local Interconnect Network Serial Data Bus 2	I	—

9	—	—	—	—	I	—
10	—	—	—	—	I	—
11	—	—	—	—	I	—
12	—	—	—	—	I	—
13	—	—	—	—	I	—
14	—	—	—	—	I	—
15	—	—	—	—	I	—
16	—	—	—	—	I	—

K29R Seat Heating Control Module - Rear X2 (Z75+KB6)





Connector Part Information

Harness Type: Rear Seat

OEM Connector: 89047352

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F YESC Kaizen Series (BK)

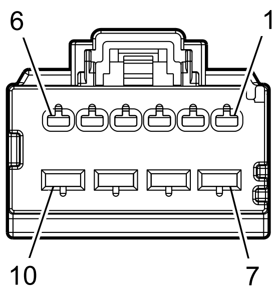
Terminal Part Information

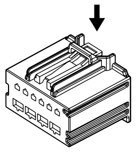
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29R Seat Heating Control Module - Rear X2 (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 4	—	—	—	Not Occupied	—	—
5	0.35	BK	1150	Ground	I	—
6	0.35	GN/BU	6133	Local Interconnect Network Serial Data Bus 2	I	—
7 - 8	—	—	—	Not Occupied	—	—

K29 Seat Heating Control Module X1 (X88/Z88+KQV)





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 31372-1000

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (BK)

Terminal Part Information

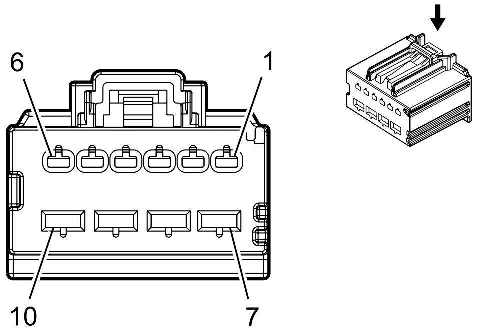
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29 Seat Heating Control Module X1 (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/BR	2481	Passenger Heated Back Element Control	II	—
2	0.75	BR/BU	2479	Passenger Heated Seat Element Control	II	—
3	0.75	GY/BK	2480	Passenger Heated Seat Element Low Reference	II	—
4	0.75	BR/BK	2078	Driver Heated Seat Element Low Reference	II	—
5	0.75	BR	2432	Driver Heated Back Element Control	II	—
6	0.75	BN/VT	2077	Driver Heated Seat Element Control	II	—
7	0.75	RD/GN	6140	Battery Positive Voltage	III	—

8	0.75	BK	1250	Ground	III	—
9	—	—	—	—	I	—
10	0.75	RD/GN	5140	Battery Positive Voltage	III	—

K29 Seat Heating Control Module X1 (Z75+KB6)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 31372-1000

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (BK)

Terminal Part Information

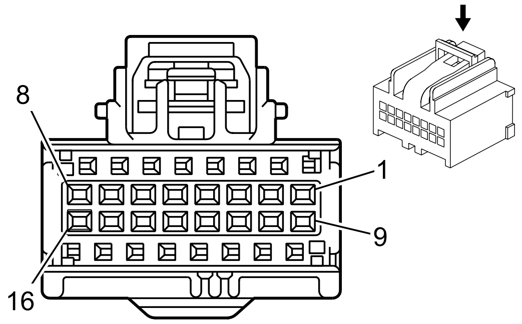
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29 Seat Heating Control Module X1 (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6140	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	WH/BN	2481	Passenger Heated Back Element Control	I	—
4	0.75	BN/BU	2479	Passenger Heated Seat Element Control	I	—
5	0.75	BN	2432	Driver Heated Back Element Control	I	—
6	0.75	BN/VT	2077	Driver Heated Seat Element Control	I	—
7	—	—	—	Not Occupied	—	—
8	0.75	BK	1250	Ground	II	—
9	—	—	—	Not Occupied	—	—

9	—	—	—	Not Occupied	—	—
10	0.75	RD/GN	5140	Battery Positive Voltage	II	—

K29 Seat Heating Control Module X2 (X88/Z88+KQV)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 15136073

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

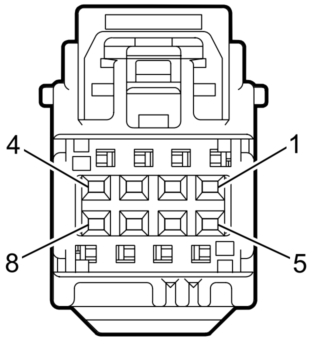
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

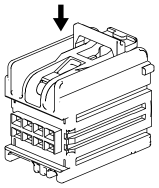
K29 Seat Heating Control Module X2 (X88/Z88+KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/YE	2080	Driver Heated Seat NTC Low Reference	II	—
2	0.5	BK/GY	2435	Passenger Heated Seat NTC Low Reference	II	—
3	0.5	BN	2425	Driver Heated Back NTC Signal	II	—
4	0.5	WH/BU	2436	Passenger Heated Back NTC Signal	II	—
5	0.5	WH/GY	2434	Passenger Heated Seat NTC Signal	II	—
6	0.5	YE/GY	2079	Driver Heated Seat NTC Signal	II	—
7	—	—	—	—	I	—

8	0.35	GN/BN	6133	Local Interconnect Network Serial Data Bus 2	II	—
9	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	II	—
10	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	II	—
11	—	—	—	—	I	—
12	0.5	BK/GN	2482	Passenger Heated Back NTC Low Reference	II	—
13	—	—	—	—	I	—
14	—	—	—	—	I	—
15	—	—	—	—	I	—
16	—	—	—	—	I	—

K29 Seat Heating Control Module X2 (Z75+KB6)





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-9028-30

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F YESC Kaizen Series (BK)

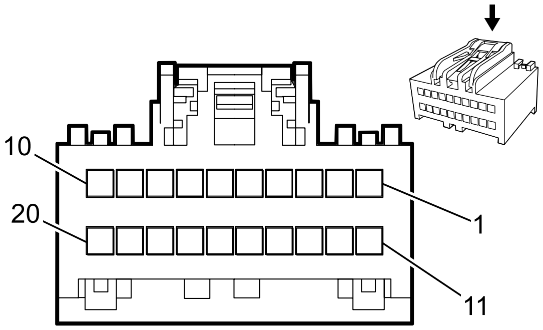
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K29 Seat Heating Control Module X2 (Z75+KB6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 5	—	—	—	Not Occupied	—	—
6	0.35	GN/BU	6133	Local Interconnect Network Serial Data Bus 2	I	—
7 - 8	—	—	—	Not Occupied	—	—

K33 HVAC Control Module X1



Connector Part Information

Harness Type: —

OEM Connector: 19153728

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 0.64 Series (GN)

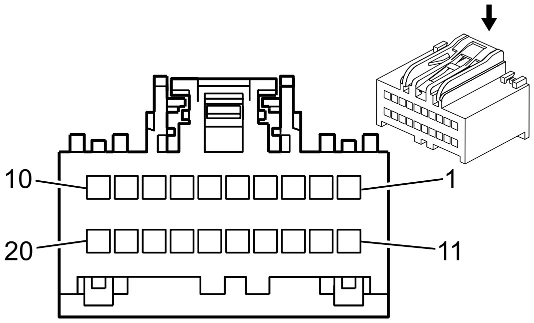
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K33 HVAC Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BU/WH	734	Inside Air Temperature Sensor Signal	I	—
5 - 12	—	—	—	Not Occupied	—	—
13	0.35	YE/VT	1783	Twilight Sentinel Delay Signal	I	-UE1
14	0.35	YE/VT	1783	Twilight Sentinel Delay Signal	I	UE1
15 - 17	—	—	—	Not Occupied	—	—
18	0.35	BN	404	Upper Air Temperature Sensor Signal	I	—
19	0.35	BN/BK	405	Lower Air Temperature Sensor Signal	I	—
20	0.35	GY	590	Solar Sensor Driver Signal	I	—

K33 HVAC Control Module X2



Connector Part Information

Harness Type: —

OEM Connector: 15126709

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F USCAR 64 Series (BN with WH Terminal Position Assurance)

Terminal Part Information

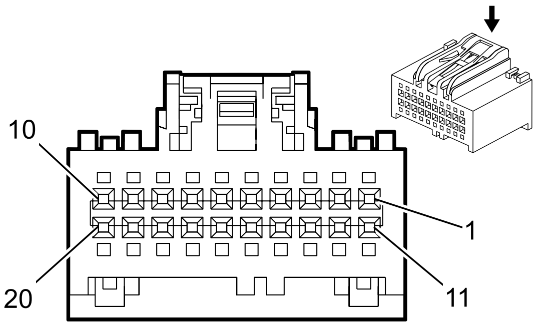
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K33 HVAC Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/VT	3340	Battery Positive Voltage	I	—
2	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.35	BK/WH	1851	Signal Ground	I	—
9	0.5	VT/GY	539	Run/Crank Ignition 1 Voltage	I	—
10	0.5	BU/YE	7574	Electric Variable Displacement Control	I	—
11	0.5	BU/BN	7573	Electric Variable Displacement Supply	I	—

12 - 14	—	—	—	Not Occupied	—	—
15	0.35	BU/GY	754	Blower Motor Speed Control	I	—
16	0.35	GN/BK	2211	Rear Blower Motor Speed Control	I	—
17	0.35	GY/RD	598	5V Reference	I	—
18	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—
19	0.35	BN/VT	193	Rear Defog Relay Control	I	—
20	—	—	—	Not Occupied	—	—

K33 HVAC Control Module X3



Connector Part Information

Harness Type: —

OEM Connector: 15126711

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 0.64 Series (BK)

Terminal Part Information

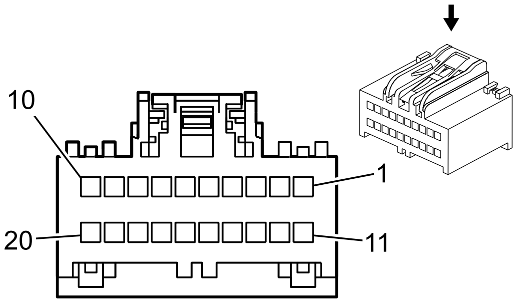
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K33 HVAC Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU	516	Upper Left Air Temperature Sensor Signal	I	—
2	0.35	YE/BN	2273	Mode Door Control	I	—
3	0.35	WH	119	Mode Door Control	I	—
4	0.35	WH/GN	2275	Mode 1 Valve Position Sensor Signal	I	—
5 - 8	—	—	—	Not Occupied	—	—
9	0.35	BK/YE	407	Sensor Low Reference	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	GY/GN	2210	Air Temperature Door Control	I	—
12	0.35	BU/BN	1199	Air Temperature Door Control	I	—

13	0.35	BU/YE	733	Air Temperature Door Position Signal	I	—
14 - 15	—	—	—	Not Occupied	—	—
16	0.35	YE/BK	2274	Recirculation Door Control	I	—
17	0.35	GN	1614	Recirculation Door Control	I	—
18	0.35	VT/GN	1838	Recirculation Door Position Signal	I	—
19	—	—	—	Not Occupied	—	—
20	0.35	GY	6137	EVAP Core Temperature Sensor Signal	I	—

K33 HVAC Control Module X4



Connector Part Information

Harness Type: —

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F USCAR 64 Series (GY)

Terminal Part Information

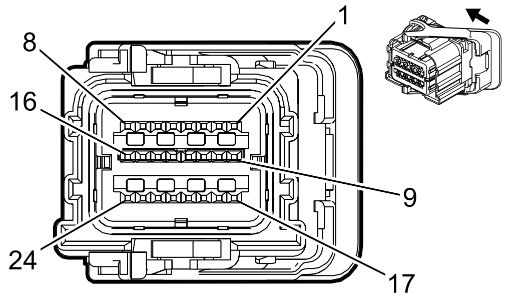
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K33 HVAC Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 4	—	—	—	Not Occupied	—	—
5	0.35	GY/BK	2778	Passenger Air Temperature Motor Control	I	—
6	0.35	WH/BK	1236	Passenger Air Temperature Door Control	I	—
7	0.35	BN/BU	1646	Passenger Air Temperature Door Position Signal	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	YE	517	Upper Right Air Temperature Sensor Signal	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	GN	518	Lower Left Air Temperature Sensor Signal	I	—
12	0.35	RD	520	Lower Right Air Temperature Sensor Signal	I	—

13	0.35	GN/WH	5729	Rear Mode Motor Control	I	—
14	0.35	BK/GN	5730	Rear Mode Motor Low Reference	I	—
15	0.35	GY	2599	Rear Mode Motor Signal	I	—
16	—	—	—	Not Occupied	—	—
17	0.35	WH/BN	2775	Rear Air Temperature Motor Control	I	—
18	0.35	GY	2614	Rear Air Temperature Door Control	I	—
19	0.35	GY/BU	2145	Passenger Air Temperature Switch Signal	I	—
20	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1



Connector Part Information

Harness Type: Body

OEM Connector: 13887360

Service Connector: 19328755

Description: 24-Way F 0.64 Series, Sealed (YE)

Terminal Part Information

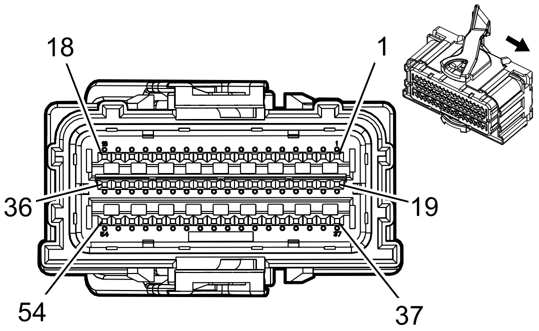
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K36 Inflatable Restraint Sensing and Diagnostic Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/GN	3023	Steering Wheel Module Stage 2 High Control	I	—
2	0.35	WH/OG	3022	Steering Wheel Module Stage 2 Low Control	I	—
3	0.35	BN/OG	3020	Steering Wheel Module Stage 1 Low Control	I	—
4	0.35	OG/VT	3021	Steering Wheel Module Stage 1 High Control	I	—
5	0.35	YE/OG	3025	Passenger IP Module Stage 1 High Control	I	—
6	0.35	OG/WH	3024	Passenger IP Module Stage 1 Low Control	I	—
7	0.35	OG/VT	3026	Passenger IP Module Stage 2 Low Control	I	—
8	0.35	GY/OG	3027	Passenger IP Module Stage 2 High Control	I	—

9	0.5	RD/GN	4440	Battery Positive Voltage	I	—
10	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
11	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
12	0.35	GN	2308	Passenger Air Bag Off Indicator Control	I	—
13	0.35	VT/OG	371	Passenger IP Module Disable Switch Signal	I	—
14	0.35	D-BU/OG	7328	Passenger IP Module Disable Switch Low Reference	I	—
15	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—
18	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
19	0.5	BK/WH	2751	Signal Ground	I	—
20	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
21 - 24	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2



Connector Part Information

Harness Type: Body

OEM Connector: 13944372

Service Connector: 19303770

Description: 54-Way F 0.64 Series, Sealed (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

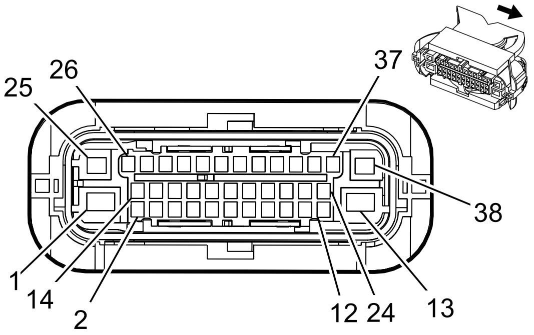
K36 Inflatable Restraint Sensing and Diagnostic Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/WH	4107	Center Side Impact Module High Control	I	—
2	0.35	VT	4106	Center Side Impact Module Low Control	I	—
3 - 8	—	—	—	Not Occupied	—	—
9	0.35	OG/YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
10	0.35	YE/OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—
11	0.35	GY/OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—
12	0.35	OG/BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
13	0.35	OG/D-BU	3068	Driver Side Impact Module High Control	I	—

14	0.35	GN/OG	3069	Driver Side Impact Module Low Control	I	—
15	0.35	BN/OG	3067	Passenger Side Impact Module Low Control	I	—
16	0.35	OG/GY	3066	Passenger Side Impact Module High Control	I	—
17	0.35	OG/GN	5019	Left Front Head Curtain Module High Control	I	—
18	0.35	VT/OG	5020	Left Front Head Curtain Module Low Control	I	—
19	0.35	OG/GN	2132	Left Front Side Impact Sensing Module Signal	I	—
20	0.35	BK/OG	6628	Left Front Side Impact Sensing Module Low Reference	I	—
21	0.35	BK/OG	6629	Right Front Side Impact Sensing Module Low Reference	I	—
22	0.35	BN/OG	2134	Right Front Side Impact Sensing Module Signal	I	—
23	0.35	OG/YE	354	Left Front Discriminating Sensor Signal	I	—
24	0.35	BK/OG	5045	Left Front Discriminating Sensor Low Reference	I	—
25	0.35	BK/OG	5600	Right Front Discriminating Sensor Low Reference	I	—
26	0.35	OG/GN	1409	Right Front Discriminating Sensor Signal	I	—
27	0.35	OG/D-BU	6620	Left Middle Side Impact Sensing Module Signal	I	—
28	0.35	BK/OG	6621	Left Middle Side Impact Sensing Module Low Reference	I	—
29	0.35	BK/OG	6625	Right Middle Side Impact Sensing Module Low Reference	I	—

30	0.35	OG/VT	6624	Right Middle Side Impact Sensing Module Signal	I	—
31 - 36	—	—	—	Not Occupied	—	—
37	0.35	RD	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
38	0.35	GY	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—
39	0.35	WH	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—
40	0.35	GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
41	0.35	OG/BN	238	Driver Seat Belt Switch Signal	I	—
42	0.35	OG/GN	5055	Driver Seat Position Switch Signal	I	—
43	0.35	BK/OG	1363	Driver Seat Belt Switch Low Reference	I	—
44	0.35	BK/OG	1361	Passenger Seat Belt Switch Low Reference	I	—
45	0.35	OG/VT	1362	Passenger Seat Belt Switch Signal	I	—
46	0.35	OG/D-BU	5056	Passenger Seat Position Switch Signal	I	—
47 - 52	—	—	—	Not Occupied	—	—
53	0.35	OG/GY	5021	Right Front Head Curtain Module High Control	I	—
54	0.35	WH/OG	5022	Right Front Head Curtain Module Low Control	I	—

K38 Chassis Control Module



Connector Part Information

Harness Type: Chassis

OEM Connector: 15533088

Service Connector: 19329924

Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	19119772	J-35616-35 (VT)	J-38125-557	Not Available	Not Available	Not Available	Not Available
III	19353101	J-35616-40 (BU)	J-38125-556	Not Available	Not Available	Not Available	Not Available

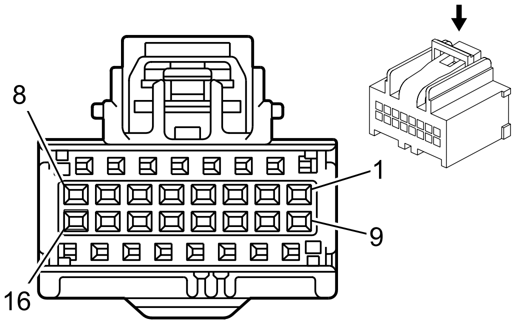
K38 Chassis Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/WH	2040	Battery Positive Voltage	III	—
2	0.5	GN/RD	1214	Right Rear Strut Position Sensor 5V Reference	I	—
3	0.5	BK/YE	1215	Right Rear Strut Position Sensor Low Reference	I	—
4	0.5	GN/GY	1216	Right Rear Strut Position Sensor Signal	I	—
5	0.5	YE/RD	1208	Left Rear Strut Position Sensor 5V Reference	I	—
6	0.5	BK/GN	1209	Left Rear Strut Position Sensor Low Reference	I	—
7	0.5	GN/WH	1210	Left Rear Strut Position Sensor Signal	I	—

8	0.5	D-BU/RD	6076	Real Time Damping Air Pressure Sensor 5V Reference	I	—
9	0.5	BK/YE	6077	Real Time Damping Air Pressure Sensor Low Reference	I	—
10	0.5	YE/GN	6075	Real Time Damping Air Pressure Sensor Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.75	BK	1750	Ground	III	—
14	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	I	—
19	0.5	BK/YE	7631	Integrated Trailer Brake Controller Switch Low Reference	I	—
20	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	I	—
21	0.5	GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	I	—
22	0.5	YE/BK	2224	Trailer Brake Enable Signal	I	—
23	0.5	WH/BK	2223	Trailer Brake Control Signal	I	—
24	—	—	—	Not Occupied	—	—
25	0.75	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
26	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—

27	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
28	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
29	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
30	0.5	GN/VT	4114	Local Interconnect Network Serial Data Bus 14	I	—
31 - 34	—	—	—	Not Occupied	—	—
35	0.5	BN/YE	1112	Damping Relay Coil Control	I	—
36	0.75	WH/GN	320	Automatic Level Control Exhaust Solenoid Control	I	—
37 - 38	—	—	—	Not Occupied	—	—

K39 Liftgate Control Module X1



Connector Part Information

Harness Type: Liftgate

OEM Connector: 15491285

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

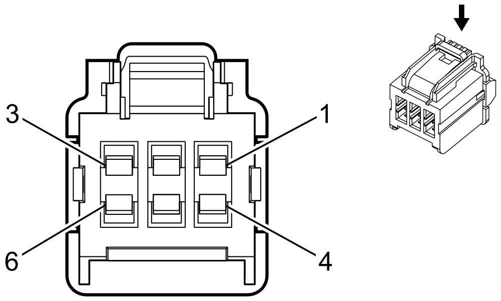
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K39 Liftgate Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/D-BU	6112	Power Lift Gate On/Off Switch Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/RD	3033	Lift Gate Shut Face Switch Signal	I	—
4	0.35	VT/GN	3987	Cinch Latch Lift Gate Signal	I	—
5	0.35	D-BU/BK	6000	Lift Gate Ajar Switch Signal 2	I	—
6	0.35	YE	3988	Detent Lift Gate Signal	I	—
7	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
8	0.35	WH/BK	6126	Lift Gate Object Sensor 2 Signal	I	—

9	0.35	GN/WH	6127	Lift Gate Unlatch Switch Signal	I	—
10	0.5	YE/OG	5797	Rear Closure Handle Switch Open Signal	I	—
11	—	—	—	Not Occupied	—	—
12	0.5	GY/BK	6113	Rear Lift Gate Open/Close Switch Signal	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	YE/D-BU	5797	Rear Closure Handle Switch Open Signal	I	—
15	0.5	GN/BN	4118	Local Interconnect Network Serial Data Bus 18	I	—
16	0.35	BK/VT	5801	Lift Gate Object Sensor Low Reference	I	—

K39 Liftgate Control Module X2



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13796274

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 280 GT Series (BK)

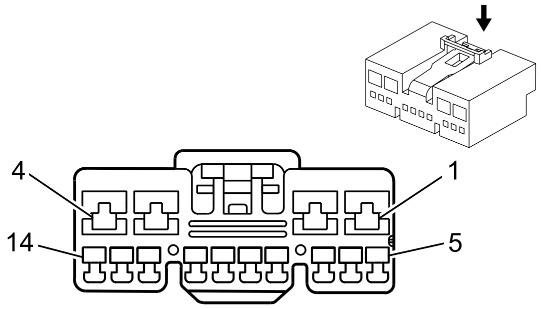
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K39 Liftgate Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/GY	5791	Lift Gate Cinch Latch Motor Close Control	I	—
2	1	BN	5790	Lift Gate Cinch Latch Motor Open Control	I	—
3	3	RD/GY	7040	Battery Positive Voltage	I	—
4	0.5	RD/D-BU	840	Battery Positive Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	3	BK	1450	Ground	I	—

K39 Liftgate Control Module X3



Connector Part Information

Harness Type: Liftgate

OEM Connector: 15466088

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F 0.64, 2.8 YESC Series (L-GY)

Terminal Part Information

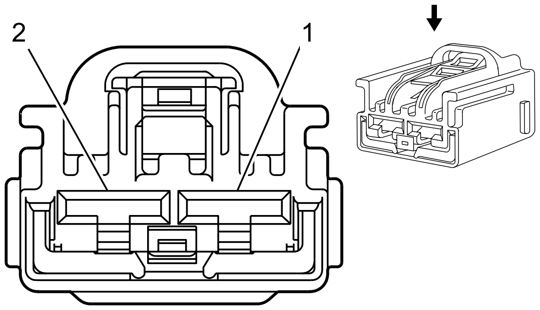
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K39 Liftgate Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	WH	5798	Lift Gate Open/Close Motor Open Control	I	—
2	2	BN/WH	5799	Lift Gate Open/Close Motor Close Control	I	—
3 - 7	—	—	—	Not Occupied	—	—
8	0.35	BN/RD	5803	Lift Gate Position Sensor 5V Reference	II	—
9	0.35	D-BU/WH	5805	Lift Gate Position Sensor Signal 1	II	—
10	0.35	BN/YE	5806	Lift Gate Position Sensor Signal 2	II	—
11	0.35	BK/GN	5804	Lift Gate Position Sensor Low Reference	II	—
12	—	—	—	Not Occupied	—	—

13	0.5	GY	3986	Cinch Latch Lift Gate Stall Motor Release Signal	II	—
14	—	—	—	Not Occupied	—	—

K40D Seat Memory Control Module - Driver X1



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-6458-40

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 6.3 Series (L-GY)

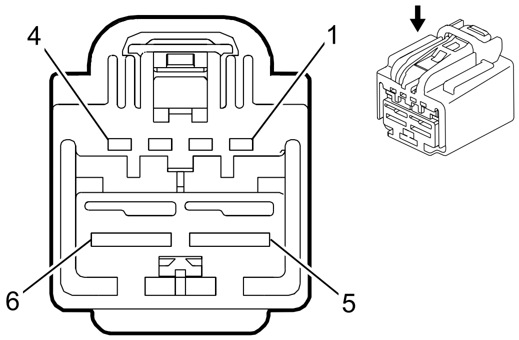
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/BN	1140	Battery Positive Voltage	I	—
2	2.5	RD/YE	5040	Battery Positive Voltage	I	—

K40D Seat Memory Control Module - Driver X2



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-9749-30

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F YESC Kaizen Series (BK)

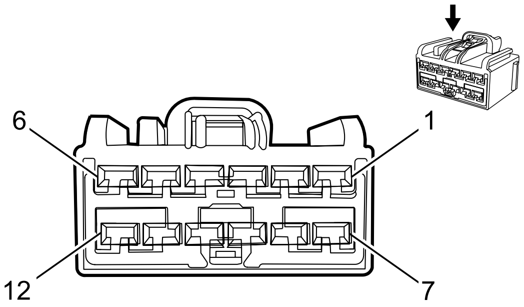
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GN/WH	7530	Local Interconnect Network Serial Data Bus 8	I	—
4	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
5	2.5	BK	1150	Ground	II	—
6	—	—	—	Not Occupied	—	—

K40D Seat Memory Control Module - Driver X3



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-6467-40

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 2.8 Kaizen Series (L-GY)

Terminal Part Information

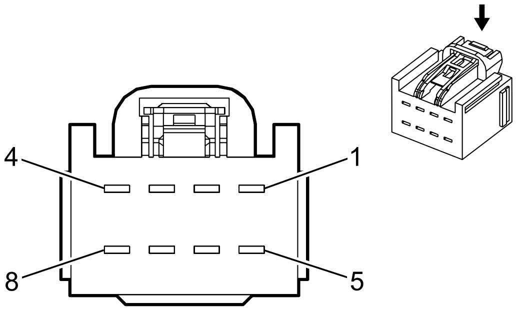
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/YE	276	Driver Power Seat Recline Motor Forward Control	I	—
2	1.5	BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	—
3	1.5	GN/BN	286	Driver Power Seat Front Vertical Motor Up Control	I	—
4	1.5	BU/VT	287	Driver Power Seat Front Vertical Motor Down Control	I	—
5	1.5	YE	282	Driver Power Seat Rear Vertical Motor Up Control	I	—
6	1.5	GY/BU	283	Driver Power Seat Rear Vertical Motor Down Control	I	—
7	1.5	YE/BN	768	Driver Power Seat Lumbar Motor Up Control	I	—
8	1.5	YE/BU	767	Driver Power Seat Lumbar Motor Down Control	I	—

9	1.5	BU	611	Driver Power Seat Lumbar Motor Forward Control	I	—
10	1.5	VT	610	Driver Power Seat Lumbar Motor Rearward Control	I	—
11	1.5	YE/BU	285	Driver Power Seat Horizontal Motor Forward Control	I	—
12	1.5	GY/GN	284	Driver Power Seat Horizontal Motor Rearward Control	I	—

K40D Seat Memory Control Module - Driver X4



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-3243-40

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 2.8 Series (L-GY)

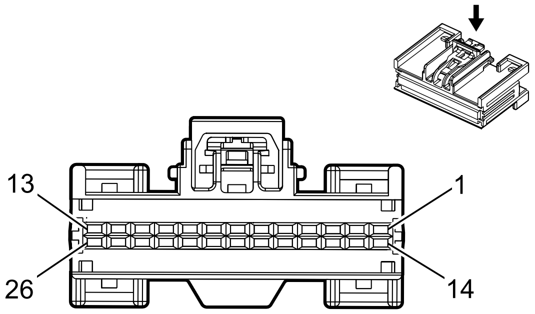
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/VT	5130	Adjustable Pedal Actuator Forward Control	I	—
2	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	I	—
3 - 8	—	—	—	Not Occupied	—	—

K40D Seat Memory Control Module - Driver X5



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7287-2043-30

Service Connector: Service by Harness - See Part Catalog

Description: 26-Way F 0.64 Series (BK)

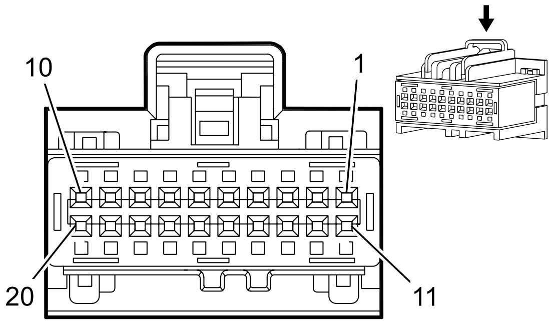
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/RD	3298	Memory Sensor High Reference 2	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	BN	3038	Right Rear Haptic Seat Motor Control	I	—
5	0.5	YE/BN	3037	Left Rear Haptic Seat Motor Control	I	—
6	0.5	BK/GY	6206	Memory Sensor Low Reference	I	—
7	0.5	YE/BN	1522	Power Seat Horizontal Forward Switch Signal	I	—
8	0.5	GY/GN	1523	Power Seat Horizontal Rearward Switch Signal	I	—
9	0.5	GN/BN	1518	Power Seat Front Vertical Up Switch Signal	I	—

10	0.5	BU/VT	1520	Power Seat Front Vertical Down Switch Signal	I	—
11	0.5	GN	569	Memory Seat Horizontal Motor Position Sensor Signal	I	—
12	0.5	BN/WH	557	Memory Seat Front Vertical Motor Position Sensor Signal	I	—
13	0.5	WH/RD	6207	Memory Sensor High Reference	I	—
14	0.5	YE	1065	Driver Seat Lumbar Forward Switch Signal	I	—
15	0.5	BU/VT	1064	Driver Seat Lumbar Rearward Switch Signal	I	—
16	0.5	WH	1066	Driver Seat Lumbar Up Switch Signal	I	—
17	0.5	YE/BK	1067	Driver Seat Lumbar Down Switch Signal	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	YE	1519	Power Seat Rear Vertical Up Switch Signal	I	—
20	0.5	YE/BU	1521	Power Seat Rear Vertical Down Switch Signal	I	—
21	0.5	GY/BK	1269	Power Seat Recline Forward Switch Signal	I	—
22	0.5	GN/GY	1270	Power Seat Recline Rearward Switch Signal	I	—
23 - 24	—	—	—	Not Occupied	—	—
25	0.5	YE/BU	568	Memory Seat Rear Vertical Motor Position Sensor Signal	I	—
26	0.5	WH/BK	570	Driver Memory Seat Recline Motor Position Sensor Signal	I	—



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 31410-1201

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 64 Series, Sealed (GY)

Terminal Part Information

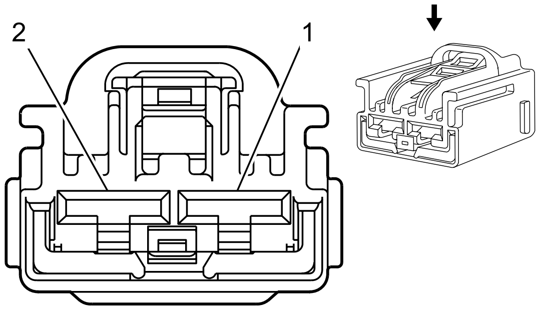
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40D Seat Memory Control Module - Driver X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BU	5952	Adjustable Pedal Position Sensor Brake Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	I	—
7	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	I	—
8 - 10	—	—	—	Not Occupied	—	—
11	0.35	BK/BU	5978	Memory Switch Low Reference	I	—
12	0.35	WH	615	Memory Seat Switch Signal 1	I	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	GN/BU	614	Memory Seat Switch Set Signal	I	—

16 - 20	—	—	—	Not Occupied	—	—

K40P Seat Memory Control Module - Passenger X1



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-6458-40

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 6.3 Series (L-GY)

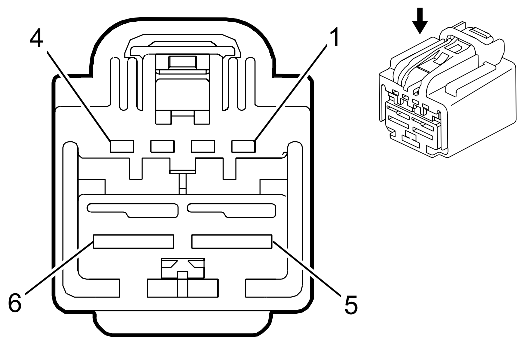
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40P Seat Memory Control Module - Passenger X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/BN	1140	Battery Positive Voltage	I	—
2	2.5	RD/BN	1440	Battery Positive Voltage	I	—

K40P Seat Memory Control Module - Passenger X2



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-9749-30

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F YESC Kaizen Series (BK)

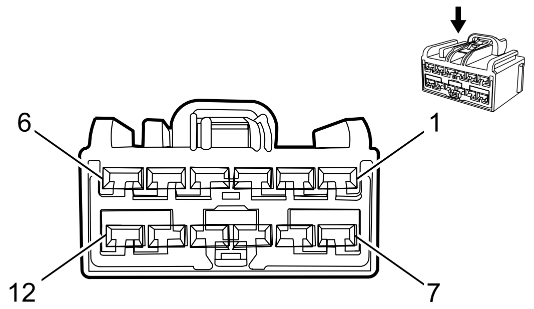
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K40P Seat Memory Control Module - Passenger X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
5	2.5	BK	1250	Ground	II	—
6	—	—	—	Not Occupied	—	—

K40P Seat Memory Control Module - Passenger X3



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-6467-40

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 2.8 Kaizen Series (L-GY)

Terminal Part Information

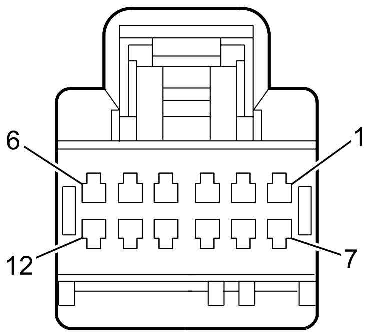
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

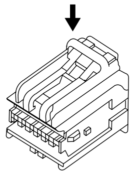
K40P Seat Memory Control Module - Passenger X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	—
2	1.5	GN	76	Passenger Power Seat Recline Motor Forward Control	I	—
3	1.5	GN/BU	298	Passenger Power Seat Front Vertical Motor Down Control	I	—
4	1.5	GN/VT	297	Passenger Power Seat Front Vertical Motor Up Control	I	—
5	1.5	BU/WH	289	Passenger Power Seat Rear Vertical Motor Down Control	I	—
6	1.5	GN/WH	288	Passenger Power Seat Rear Vertical Motor Up Control	I	—
7 - 10	—	—	—	Not Occupied	—	—
11	1.5	YE/BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	—

12	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	—

K41 Front and Rear Parking Assist Control Module X1





Connector Part Information

Harness Type: Body

OEM Connector: 13551678

Service Connector: 89047364

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

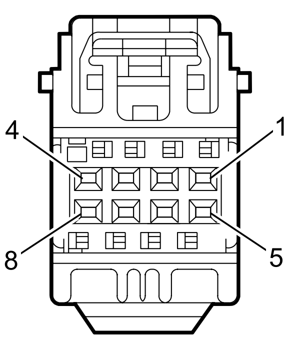
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13579945	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

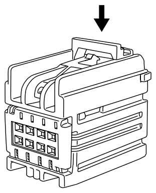
K41 Front and Rear Parking Assist Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	3140	Battery Positive Voltage	II	—
2	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
3	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	I	—
4	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
5	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
6	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
7	0.75	BK/WH	2751	Signal Ground	II	UD5/UD7-BTM-UGN
	0.5	BK/WH	2751	Signal Ground	I	UD7+UGN/BTM

	0.5	BK/WH	2751	Signal Ground	I	UD7+UGN/BTM
8	0.35	GY/GN	2555	Rear Park Assist Disable Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	D-BU/BN	3161	Parallel Park Assist Disable Switch Signal	I	—
11	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
12	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—

K41 Front and Rear Parking Assist Control Module X2





Connector Part Information

Harness Type: Body

OEM Connector: 13551679

Service Connector: 19115653

Description: 8-Way F YESC Kaizen Series (L-GY)

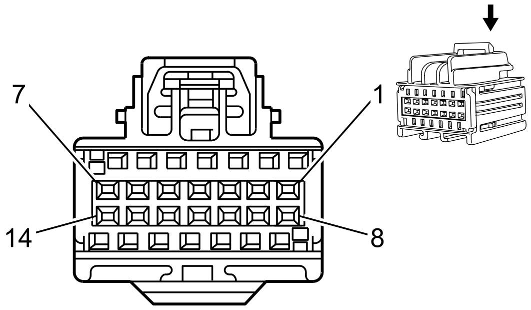
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K41 Front and Rear Parking Assist Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	2375	Left Rear Corner Object Sensor Signal	I	—
2	0.5	D-BU	3157	Right Rear Supplemental Object Sensor Signal	I	—
3	0.5	YE/D-BU	2376	Left Rear Middle Object Sensor Signal	I	—
4	0.5	BN/WH	2374	Object Sensor Control	I	—
5	0.5	YE/VT	2378	Right Rear Corner Object Sensor Signal	I	—
6	0.5	GN	3156	Left Rear Supplemental Object Sensor Signal	I	—
7	0.5	YE/WH	2377	Right Rear Middle Object Sensor Signal	I	—
8	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

K41 Front and Rear Parking Assist Control Module X3



Connector Part Information

Harness Type: Body

OEM Connector: 15491263

Service Connector: 15127038

Description: 14-Way F 0.64 Kaizen Series (BU)

Terminal Part Information

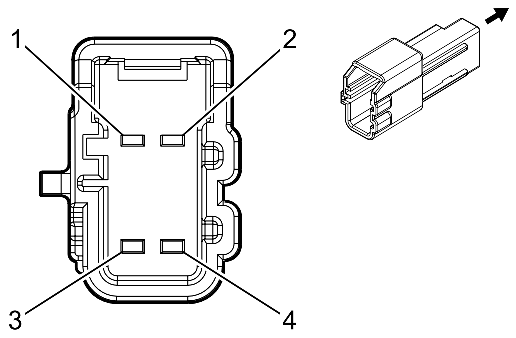
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K41 Front and Rear Parking Assist Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/VT	5213	Front Parking Left/Right/Mid Sensor	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY	3154	Left Front Supplemental Object Sensor Signal	I	—
4	0.5	VT/WH	5215	Front Parking Left Corner Sensor	I	—
5	0.5	YE/GY	5216	Front Parking Left Mid Sensor	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	BK/D-BU	5214	Front Parking Sensor Low Reference	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	GN	3155	Right Front Supplemental Object Sensor Signal	I	—

11	0.5	WH/GY	5217	Front Parking Right Corner Sensor	I	—
12	0.5	VT/GY	5218	Front Parking Right Mid Sensor	I	—
13 - 14	—	—	—	Not Occupied	—	—

K53D Seat Blower Assembly - Driver Back (X88/Z88)



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 13595572

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (BK)

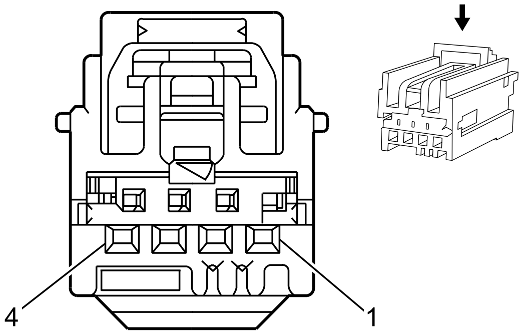
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

K53D Seat Blower Assembly - Driver Back (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	5140	Battery Positive Voltage	I	—
2	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	I	—
3	0.75	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—

K53D Seat Blower Assembly - Driver Back (Z75)



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 7283-9016-30

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F (BK)

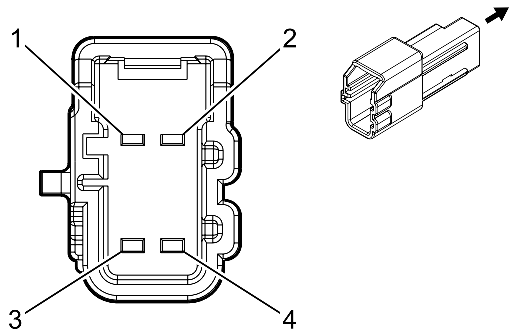
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K53D Seat Blower Assembly - Driver Back (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	5140	Battery Positive Voltage	I	—
2	0.75	BN	2432	Driver Heated Back Element Control	I	—
3	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	I	—
4	0.75	BK	1150	Ground	I	—

K53P Seat Blower Assembly - Passenger Back (X88/Z88)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 13595572

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (BK)

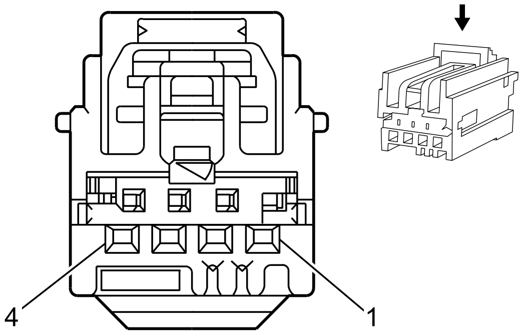
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K53P Seat Blower Assembly - Passenger Back (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6140	Battery Positive Voltage	I	—
2	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	I	—
3	0.75	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—

K53P Seat Blower Assembly - Passenger Back (Z75)



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 7283-9016-30

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F (BK)

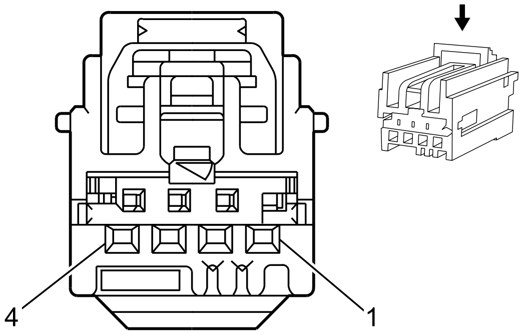
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K53P Seat Blower Assembly - Passenger Back (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6140	Battery Positive Voltage	I	—
2	0.75	WH/BN	2481	Passenger Heated Back Element Control	I	—
3	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	I	—
4	0.75	BK	1250	Ground	I	—

K55D Seat Blower Assembly - Driver Cushion (Z75)



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-9016-30

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F (BK)

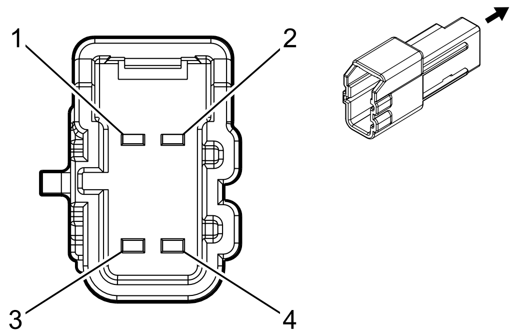
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K55D Seat Blower Assembly - Driver Cushion (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	5140	Battery Positive Voltage	I	—
2	0.75	BN/VT	2077	Driver Heated Seat Element Control	I	—
3	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	I	—
4	0.75	BK	1150	Ground	I	—

K55D Seat Blower Assembly - Driver Cushion (X88/Z88)



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 13595573

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (GY)

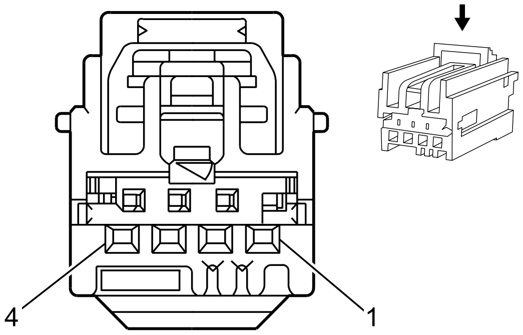
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K55D Seat Blower Assembly - Driver Cushion (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	5140	Battery Positive Voltage	I	—
2	0.35	GN/VT	5906	Driver Seat Vent Motor Control 1	I	—
3	0.75	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—

K55P Seat Blower Assembly - Passenger Cushion (Z75)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-9016-30

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F (BK)

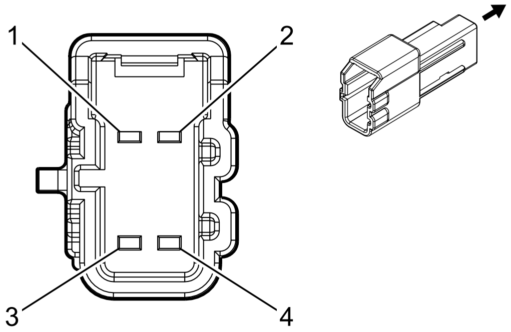
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K55P Seat Blower Assembly - Passenger Cushion (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6140	Battery Positive Voltage	I	—
2	0.75	BN/BU	2479	Passenger Heated Seat Element Control	I	—
3	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	I	—
4	0.75	BK	1250	Ground	I	—

K55P Seat Blower Assembly - Passenger Cushion (X88/Z88)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 13595573

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.2 Series (GY)

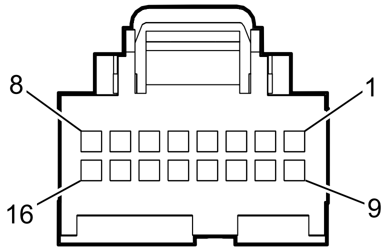
Terminal Part Information

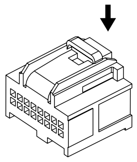
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not Required	J-35616-13 (BU)	No Tool Required

K55P Seat Blower Assembly - Passenger Cushion (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	6104	Lower Air Temperature Sensor Low Reference	I	—
2	0.35	VT/WH	5908	Passenger Seat Vent Motor Control 1	I	—
3	0.75	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X1





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13819409

Service Connector: 13582576

Description: 16-Way F 0.64 OCS Series (BK)

Terminal Part Information

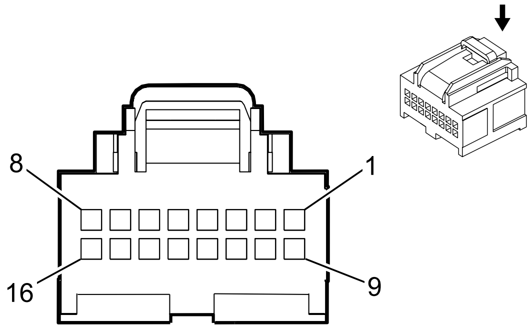
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K56 Serial Data Gateway Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/VT	3340	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
4	0.35	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	BK/WH	1851	Signal Ground	I	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
9	—	—	—	Not Occupied	—	—

10	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
11	0.35	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
12	0.35	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
13	0.35	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
14	0.35	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
15	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
16	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13781484

Service Connector: 13582575

Description: 16-Way F 0.64 OCS Series (GY)

Terminal Part Information

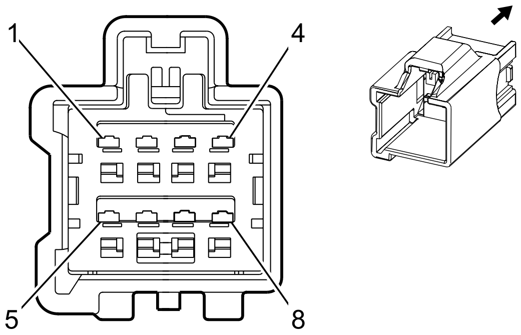
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K56 Serial Data Gateway Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
2	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
3	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
4	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
5	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
6	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
7	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
8	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—

9	—	—	—	Not Occupied	—	—
10	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
14	0.35	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—
15	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
16	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—

K60 Steering Column Lock Module



Connector Part Information

Harness Type: —

OEM Connector: 13580897

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 1.5 YESC Kaizen Series (L-GY)

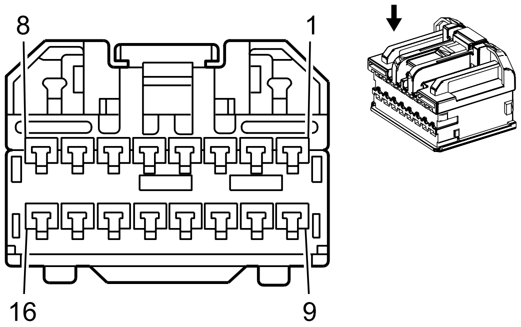
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K60 Steering Column Lock Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	BU/VT	5904	Steering Column Lock Status Signal	I	—
3	0.75	BU/VT	807	OFF /Accessory Ignition Voltage	I	—
4	0.35	GN/VT	1601	Steering Column Lock Signal	I	—
5	0.75	RD/GY	4140	Battery Positive Voltage	I	—
6	0.75	BK	1050	Ground	I	—
7	0.75	BK	1050	Ground	I	—
8	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—

K69 Transfer Case Control Module X1



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 13547237

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 1.5 Series (GY)

Terminal Part Information

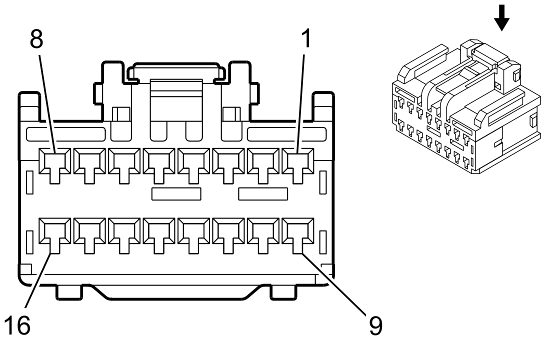
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	7478	Rotary Position Sensor Low Reference	I	—
2	0.5	WH/GN	7479	Rotary Position Sensor Signal	I	—
3	0.35	YE	7474	Incremental Encoder Direction Signal	I	—
4	0.5	GY/BK	1570	Front Axle Actuator Control	I	—
5	0.35	D-BU/GY	7473	Incremental Encoder Impulse Signal	I	—
6	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
7	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—
8	—	—	—	Not Occupied	—	—

9	0.5	WH/RD	7477	Rotary Position Sensor 5V Reference	I	—
10	0.35	WH/GN	7475	Incremental Encoder Sensor 8V Reference	I	—
11	0.35	VT	7476	Incremental Encoder Sensor Low Reference	I	—
12	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
13	1	YE/BN	1569	Transfer Case Lock Solenoid Control	I	—
14 - 16	—	—	—	Not Occupied	—	—

K69 Transfer Case Control Module X2



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 15489823

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 1.5 Series (BK)

Terminal Part Information

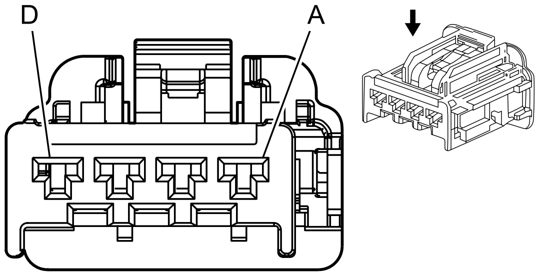
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	VT/WH	1565	4 LO Indicator Control	I	—
4	0.35	VT/GN	1739	Run/Crank Ignition 1 Voltage	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	VT/YE	5985	Accessory Wakeup Serial Data	I	—
7	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
8	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.35	GY/GN	1561	AWD Indicator Control	I	—

12	0.35	BN	1560	Neutral Indicator Control	I	—
13	0.35	GN/BK	1563	2 HI Indicator Control	I	—
14	0.35	BN/BK	1566	4 HI Indicator Control	I	—
15	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
16	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—

K69 Transfer Case Control Module X3



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 15466671

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 280 GT Series (L-GY)

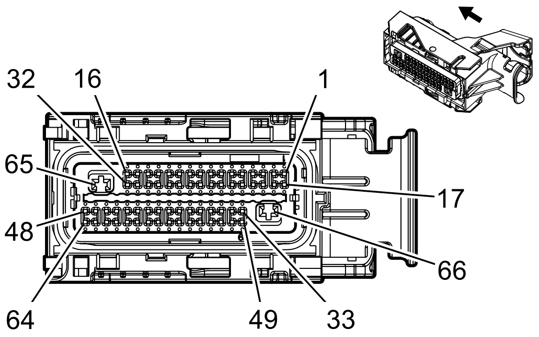
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K69 Transfer Case Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	YE/VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
B	4	YE/GY	1552	Transfer Case Motor Clockwise Control	I	—
C	3	RD/GY	1342	Battery Positive Voltage	I	—
D	3	BK	550	Ground	I	—

K71 Transmission Control Module



Connector Part Information

Harness Type: Engine

OEM Connector: 13965710

Service Connector: 19329822

Description: 66-Way F 0.64, 2.8 Series, Sealed (BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	1326030-8	Lear 17	A	4
II	13575812	J-35616-64B (LT BU)	J-38125-213	Not Available	Not Available	Not Available	Not Available

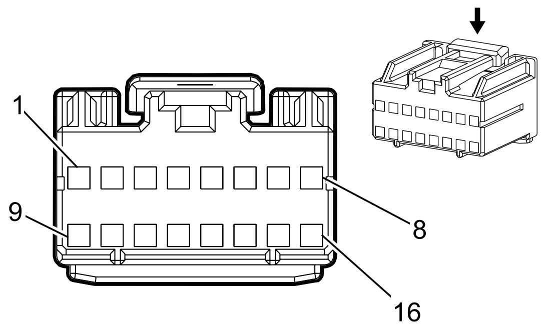
K71 Transmission Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/D-BU	4507	Transmission Clutch H Control	II	—
2	0.5	D-BU	6401	Clutch B Control	II	—
3	0.5	GY/GN	6403	Clutch D Control	II	—
4	0.5	VT	4509	Transmission Clutch F Control	II	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.5	YE/GN	4170	Transmission Position Sensor B 9V Reference	II	—
8	0.5	YE/D-BU	4171	Transmission Position Sensor A 9V Reference	II	—
9 - 10	—	—	—	Not Occupied	—	—

11	0.5	YE/GN	1147	Transmission Shift Inhibit Signal	II	—
12	0.5	GN/YE	6353	Input Speed Signal	II	—
13	0.5	GN/VT	4510	Transmission Intermediate Speed Signal	II	—
14	0.5	GY/D-BU	6358	Output Speed Signal	II	—
15	0.5	GN/VT	4510	Transmission Intermediate Speed Signal	II	—
16	—	—	—	Not Occupied	—	—
17	0.5	WH	4508	Transmission Clutch G Control	II	—
18	0.5	BN	6400	Clutch A Control	II	—
19	0.5	GY	6402	Clutch C Control	II	—
20	0.5	YE/BN	6404	Clutch E Control	II	—
21 - 32	—	—	—	Not Occupied	—	—
33	0.5	GN/GY	6387	Transmission High Side Driver 1 Signal Driver	II	—
34	—	—	—	Not Occupied	—	—
35	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	II	—
36	—	—	—	Not Occupied	—	—
37	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
38	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
39 - 48	—	—	—	Not Occupied	—	—
49	0.5	GY/BN	6388	Transmission High Side Driver 2 Signal	II	—

50	—	—	—	Not Occupied	—	—
51	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
52	—	—	—	Not Occupied	—	—
53	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
54	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
55 - 62	—	—	—	Not Occupied	—	—
63	0.5	BN/WH	585	Transmission Oil Temperature Sensor Signal	II	—
64	0.5	WH/YE	6317	ETRS Out of Park Switch Signal	II	—
65	1.5	BK/WH	451	Signal Ground	I	—
66	1.5	RD/GN	1840	Battery Positive Voltage	I	—

K73 Telematics Communication Interface Control Module X1



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15431362

Service Connector: 15306351

Description: 16-Way F 100A Micro-Pack Series (NA)

Terminal Part Information

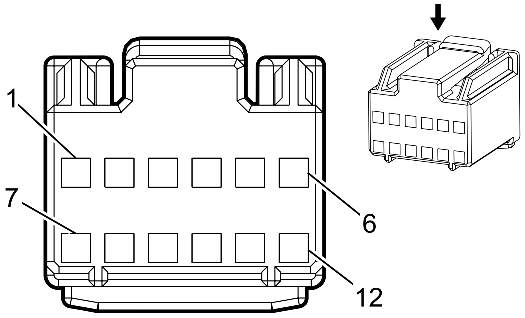
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575548	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

K73 Telematics Communication Interface Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	I	—
2	0.35	BN/WH	2517	Keypad Red LED Control	I	—
3	0.35	YE/VT	2516	Keypad Green LED Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	GN/BK	2515	Keypad Control	I	—
7	0.35	BK	2550	Ground	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	GY/BK	1160	External Speaker Signal (-)	I	—
10	0.35	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—

11	0.35	GN/WH	2514	Keypad Signal	I	—
12	0.35	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.35	RD/D-BU	3240	Battery Positive Voltage	I	—
16	—	—	—	Not Occupied	—	—

K73 Telematics Communication Interface Control Module X2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15431365

Service Connector: 88952886

Description: 12-Way F 100A Micro-Pack Series (NA)

Terminal Part Information

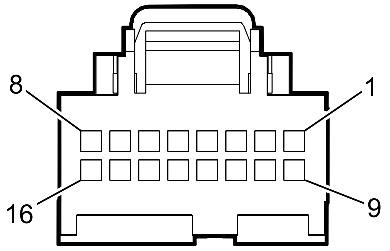
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575548	J-35616-16 (LT GN)	J-38125-559	15445905	Delphi 23	J	J

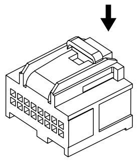
K73 Telematics Communication Interface Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	658	Cellular Telephone Voice Signal	I	—
2	0.35	BK/YE	659	Cellular Telephone Voice Low Reference	I	—
3	0.5	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
4	0.5	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
5	0.5	BARE	1792	Low Reference	I	—
6	0.35	GY/YE	5149	Voice Recognition Audio Signal	I	—
7	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
8	0.35	BARE	1782	Low Reference	I	—

9	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	—
10	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	—
11	0.35	VT/WH	1159	External Speaker Signal (+)	I	—
12	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	I	—

K74 Human Machine Interface Control Module X1





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13819409

Service Connector: 13582576

Description: 16-Way F 0.64 OCS Series (BK)

Terminal Part Information

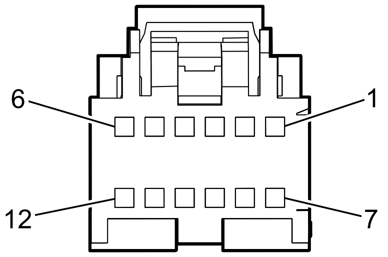
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

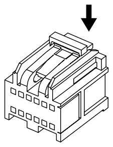
K74 Human Machine Interface Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	655	Cellular Telephone Microphone Signal	I	IO4/IO5/IO6&06-UE1
	0.35	GY/YE	5149	Voice Recognition Audio Signal	I	IO4/IO5/IO6&UE1
2	0.35	BK/BN	654	Cellular Telephone Microphone Low Reference	I	IO4/IO5/IO6&06-UE1
	0.35	BK/GY	5152	Voice Recognition Audio Low Reference	I	IO4/IO5/IO6&UE1
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	RD/VT	340	Battery Positive Voltage	I	—
8	0.75	BK	2550	Ground	I	—

9	0.5	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
10	—	—	—	Not Occupied	—	—
11	0.5	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	IO4/IO5/IO6
	0.35	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	UE1
12	0.5	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	IO4/IO5/IO6
	0.35	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	UE1
13	0.5	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
14	0.5	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—
15 - 16	—	—	—	Not Occupied	—	—

K74 Human Machine Interface Control Module X2





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33104389

Service Connector: 13594072

Description: 12-Way F 0.64 OCS Series (GY)

Terminal Part Information

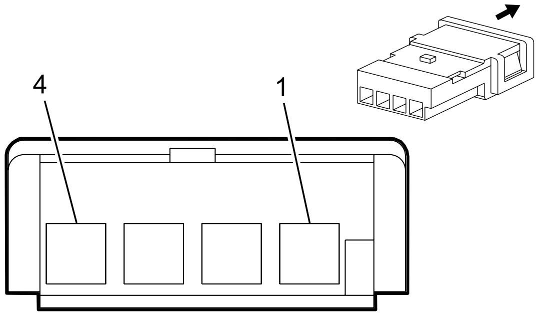
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

K74 Human Machine Interface Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/VT	3999	MOST Control	I	—
2	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
3	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GY/YE	6972	Camera Signal 2 +	I	—
6	0.35	WH/D-BU	6973	Camera Signal 2	I	—
7	—	—	—	Not Occupied	—	—
8	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
9	0.5	WH/GN	3997	MOST Serial Data (-)	I	—

10 - 12	—	—	—	Not Occupied	—	—

K77 Remote Control Door Lock Receiver



Connector Part Information

Harness Type: Body

OEM Connector: 15363838

Service Connector: 13576534

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

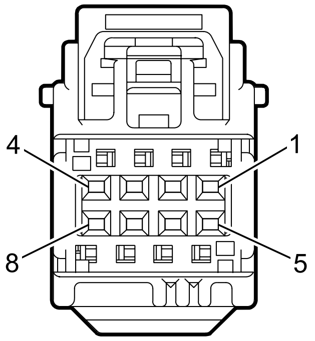
Terminal Part Information

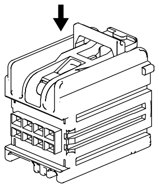
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K77 Remote Control Door Lock Receiver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	3273	Remote Function Actuator Low Reference	I	—
2	0.35	YE/GN	3274	Remote Function Actuator Transmit Signal	I	—
3	0.35	D-BU/WH	3275	Remote Function Actuator Receive Signal	I	—
4	0.35	GY/WH	3272	Remote Function Actuator Control	I	—

K78 Head-Up Display Module





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13518475

Service Connector: 13576542

Description: 8-Way F YESC Kaizen Series (BK)

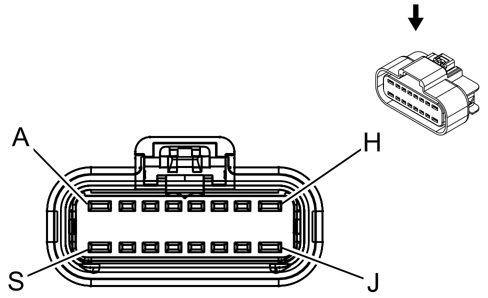
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K78 Head-Up Display Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	YE/WH	622	Head Up Display Switch Signal	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	RD/GY	2840	Battery Positive Voltage	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	BK/GN	5699	Head Up Display Switch Low Reference	I	—

K83 Park Brake Control Module



Connector Part Information

Harness Type: Chassis

OEM Connector: 15479301

Service Connector: 15306348

Description: 16-Way F 150, 280 GT Series, Sealed (BK)

Terminal Part Information

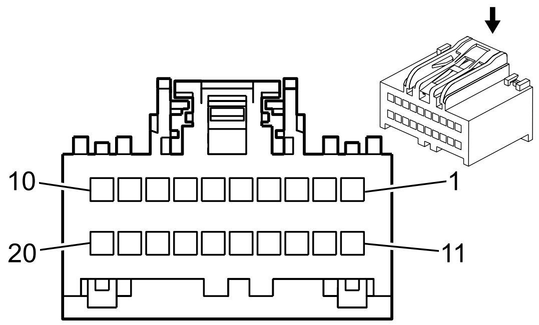
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575354	J-35616-14 (GN)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	13575402	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	13576356	J-35616-4A (PU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

K83 Park Brake Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	RD/WH	1642	Battery Positive Voltage	II	—
B	0.5	YE/RD	7683	Park Brake Release Switch Voltage Reference	I	—
C	0.5	D-BU/WH	1134	Park Brake Switch Signal	I	—
D	0.5	GY/RD	7684	Park Brake Apply Switch Voltage Reference	I	—
E	—	—	—	Not Occupied	—	—
F	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
G	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—

H	4	BK	2150	Ground	II	—
J	—	—	—	Not Occupied	—	—
K	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
L	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
M	—	—	—	Not Occupied	—	—
N	0.5	YE	1492	Park Brake Switch Supply Voltage	I	—
P	0.5	WH/D-BU	5986	Serial Data Communication Enable	I	—
R	0.5	BN	6107	Park Brake Apply Switch Signal	I	—
S	0.5	D-BU/BK	6108	Park Brake Release Switch Signal	III	—

K84 Keyless Entry Control Module X1



Connector Part Information

Harness Type: Body

OEM Connector: 15491305

Service Connector: 15126709

Description: 20-Way F USCAR 64 Series (BN)

Terminal Part Information

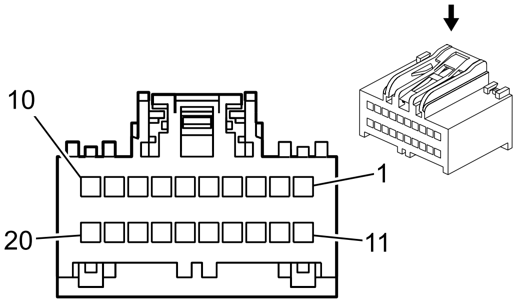
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K84 Keyless Entry Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/VT	1601	Steering Column Lock Signal	I	—
2	0.5	RD/YE	4340	Battery Positive Voltage	I	—
3	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	VT/YE	4	Accessory Ignition Voltage	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	GY/GN	4083	RAP Relay 2 Coil Control	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	WH/YE	3574	Driver Door Open Switch Signal	I	—

10	0.35	YE/D-BU	4086	Pushbutton Start Challenge Active Signal	I	—
11	0.35	GN/BK	3558	Passive Start Switch Signal 2	I	—
12	0.35	BK/GY	3559	Passive Start Switch 2 Low Reference	I	—
13	0.35	VT/BK	3	Run/Crank Ignition 1 Voltage	I	—
14	0.5	BK/WH	2751	Signal Ground	I	—
15	0.35	GY/BK	3555	Passive Start Interior Antenna 2 Signal Lo	I	—
16	0.35	BN/BK	3552	Passive Start Interior Antenna 1 Signal Hi	I	—
17	0.35	WH	3553	Passive Start Interior Antenna 1 Signal Lo	I	—
18	0.35	WH/GN	3556	Passive Start Interior Antenna 3 Signal Hi	I	—
19	0.35	GN	3557	Passive Start Interior Antenna 3 Signal Lo	I	—
20	0.35	D-BU	3554	Passive Start Interior Antenna 2 Signal Hi	I	—

K84 Keyless Entry Control Module X2



Connector Part Information

Harness Type: Body

OEM Connector: 15491304

Service Connector: 15126710

Description: 20-Way F USCAR 64 Series (GY)

Terminal Part Information

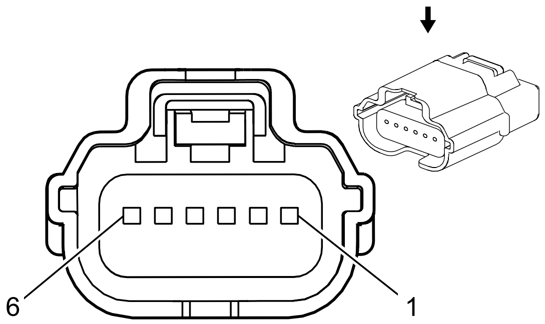
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K84 Keyless Entry Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/GY	6158	Right Rear Door Handle Switch Signal	I	—
2	0.35	BN/YE	6157	Left Rear Door Handle Switch Signal	I	—
3 - 5	—	—	—	Not Occupied	—	—
6	0.35	VT	3560	Passive Entry Driver Door Antenna Signal Hi	I	—
7	0.35	VT/GY	3561	Passive Entry Driver Door Antenna Signal Lo	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	GN/BK	3563	Passive Entry Passenger Door Antenna Signal Lo	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	VT/WH	3571	Passenger Door Handle Switch Signal	I	—

12	0.35	GN/WH	3570	Driver Door Handle Switch Signal	I	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.5	BN/GN	3568	Passive Entry Rear Closure Antenna Signal Hi	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	GN/GY	3569	Passive Entry Rear Closure Antenna Signal Lo	I	—
19	—	—	—	Not Occupied	—	—
20	0.35	GN/YE	3562	Passive Entry Passenger Door Antenna Signal Hi	I	—

K85 Passenger Presence Module



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 31404-6132

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Series, Sealed (BK)

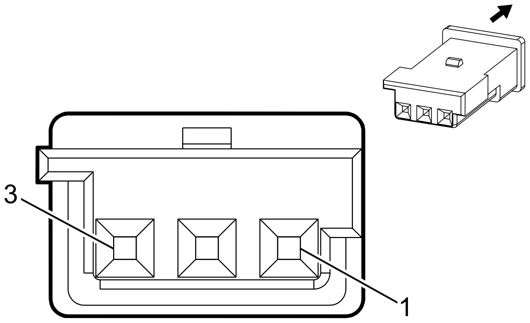
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K85 Passenger Presence Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/GN	4440	Battery Positive Voltage	I	—
2	0.5	GN	5060	Low Speed GMLAN Serial Data	I	AL0+UTL
	0.35	GN	5060	Low Speed GMLAN Serial Data	I	AL0-UTL
3	—	—	—	Not Occupied	—	—
4	0.35	BK/WH	2751	Signal Ground	I	—
5	0.35	BU/RD	5612	Passenger Seat Belt Tension Sensor 5V Reference	I	—
6	0.35	VT/OG	5611	Passenger Seat Belt Tension Sensor Signal	I	—

K89 Immobilizer Control Module



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13604026

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F Micro-Quadlock Series (PU)

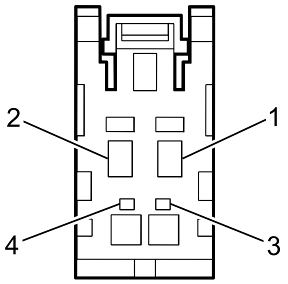
Terminal Part Information

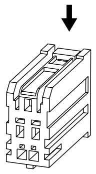
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K89 Immobilizer Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/GY	3277	Vehicle Anti-Theft System Immobilizer Low Reference	I	—
2	0.35	GN/VT	7533	Local Interconnect Network Serial Data Bus 11	I	—
3	0.35	GY/BK	3276	Vehicle Anti-Theft System Immobilizer Control	I	—

K99 Steering Column Position Control Module X1





Connector Part Information

Harness Type: —

OEM Connector: 19206654

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 1.5 Series (GY)

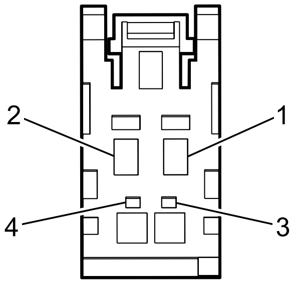
Terminal Part Information

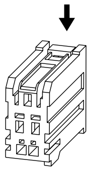
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K99 Steering Column Position Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BN/GY	2112	Steering Column Tilt Motor Down Control	I	—
2	1.0	GY/VT	2111	Steering Column Tilt Motor Up Control	I	—
3	0.35	YE	2154	Steering Column Tilt Motor Signal	I	—
4	0.35	GY/RD	2156	Steering Column Tilt Motor 5V Reference	I	—

K99 Steering Column Position Control Module X2





Connector Part Information

Harness Type: —

OEM Connector: 19206655

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 1.5 Series (GN)

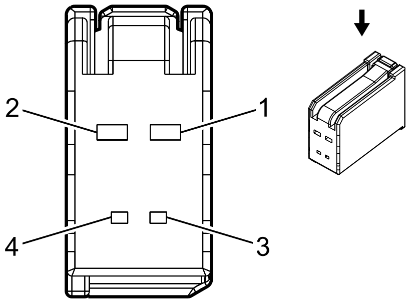
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K99 Steering Column Position Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.0	BU/BK	2098	Steering Column Telescope Motor Forward Control	I	—
2	1.0	YE/BN	2110	Steering Column Telescope Motor Rearward Control	I	—
3	0.35	YE/BK	2152	Steering Column Telescope Motor Low Reference	I	—
4	0.35	VT/GY	2153	Steering Column Telescope Motor Signal	I	—

K99 Steering Column Position Control Module X3



Connector Part Information

Harness Type: —

OEM Connector: 19206653

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 1.5 Series (WH)

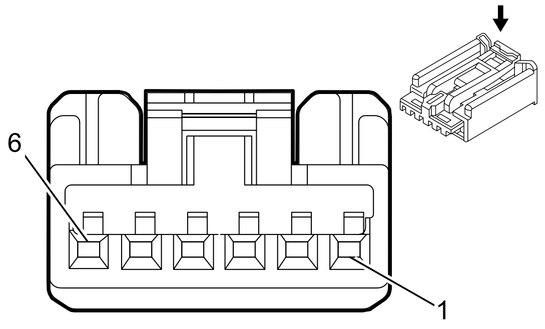
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K99 Steering Column Position Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	RD/VT	4640	Battery Positive Voltage	I	—
2	1.5	BK	1850	Ground	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	GN/WH	7530	Local Interconnect Network Serial Data Bus 8	I	—

K99 Steering Column Position Control Module X4



Connector Part Information

Harness Type: —

OEM Connector: 15269798

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

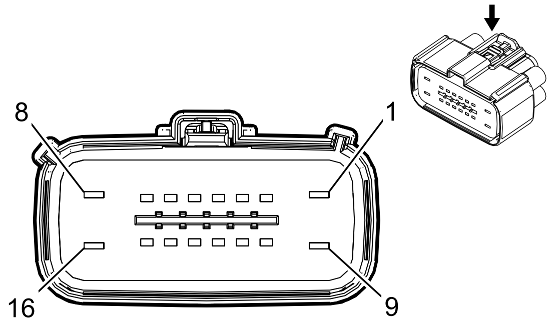
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K99 Steering Column Position Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/BN	2097	Steering Column Tilt and Telescope Down Switch Signal	I	—
2	0.35	BN/GY	2096	Steering Column Tilt and Telescope Up Switch Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	BU/YE	2094	Steering Column Tilt and Telescope Forward Switch Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	BK	1550	Ground	I	—

K111 Fuel Pump Driver Control Module



Connector Part Information

Harness Type: Chassis

OEM Connector: 33103129

Service Connector: 13589631

Description: 16-Way F 1.5, 2.8 Series, Sealed (GY)

Terminal Part Information

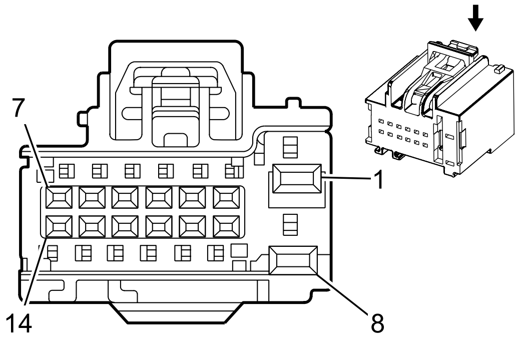
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K111 Fuel Pump Driver Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/VT	1940	Battery Positive Voltage	I	—
2	0.5	GY	5660	Fuel Pump Controller Data Out Signal	II	—
3	—	—	—	Not Occupied	—	—
4	0.5	D-BU/BK	7493	High Speed GMLAN Serial Data (+)3	II	—
5	0.5	WH	7494	High Speed GMLAN Serial Data (-)3	II	—
6	0.5	VT/GN	439	Run/Crank Ignition 1 Voltage	II	—
7	0.5	VT/YE	5985	Accessory Wakeup Serial Data	II	—
8	2.5	GY	120	Fuel Pump Control	I	—

9	2.5	BK	2150	Ground	I	—
10 - 14	—	—	—	Not Occupied	—	—
15	0.5	D-BU	7444	Fuel System Control Module Shield Ground	II	—
16	2.5	BK/GN	1580	Fuel Pump Low Reference	I	—

K124 Active Safety Control Module X1



Connector Part Information

Harness Type: Body

OEM Connector: 13601512

Service Connector: 89047362

Description: 14-Way F 0.64, 1.5 Series (BK)

Terminal Part Information

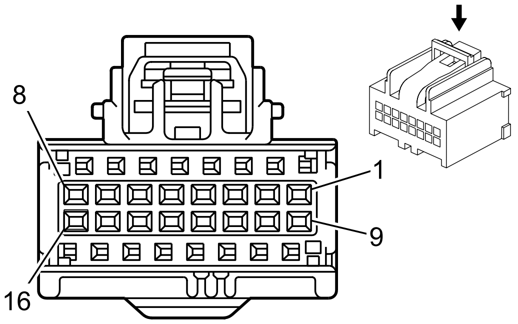
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575735	J-35616-14 (GN)	J-38125-553	12191812	Delphi 19	C	A
II	13575735	J-35616-14 (GN)	J-38125-553	12191812	Delphi 19	E	C
III	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K124 Active Safety Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	3140	Battery Positive Voltage	I	—
2	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	III	—
3	0.35	WH	3152	Lane Departure Warning Indicator Control	III	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	III	—
7	0.5	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	III	—
8	0.5	BK/WH	2751	Signal Ground	II	—

9	0.35	GY/VT	3808	Front Object Sensor Control 2	III	—
10	0.35	BN/VT	3809	Front Object Sensor Control 1	III	—
11	0.35	GY/GN	2555	Rear Park Assist Disable Signal	III	—
12	0.35	WH/D-BU	5986	Serial Data Communication Enable	III	—
13	0.5	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	III	—
14	0.5	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	III	—

K124 Active Safety Control Module X2



Connector Part Information

Harness Type: Body

OEM Connector: 15491285

Service Connector: 15136073

Description: 16-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

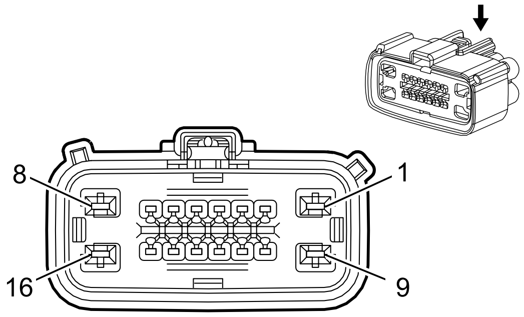
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K124 Active Safety Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
2	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
3	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
4	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	I	—
7	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
8	—	—	—	Not Occupied	—	—
9	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—

10	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
11	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
12	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
13	—	—	—	Not Occupied	—	—
14	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	I	—
15	—	—	—	Not Occupied	—	—
16	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—

K133 Trailer Brake Power Control Module



Connector Part Information

Harness Type: Chassis

OEM Connector: 13991106

Service Connector: 19329472

Description: 16-Way F 1.5, 2.8 Series, Sealed (D-GY)

Terminal Part Information

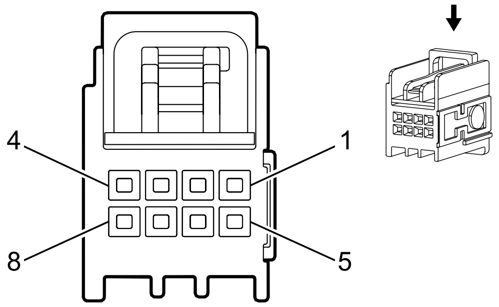
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13505803	J-35616-35 (VT)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

K133 Trailer Brake Power Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD/GN	242	Battery Positive Voltage	I	—
2	0.5	WH/BK	2223	Trailer Brake Control Signal	II	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	YE/BK	2224	Trailer Brake Enable Signal	II	—
6 - 7	—	—	—	Not Occupied	—	—
8	2.5	D-BU	47	Trailer Auxiliary Control	I	—
9	2.5	BK	1750	Ground	I	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	GN/VT	4114	Local Interconnect Network Serial Data Bus 14	II	—

13 - 16	—	—	—	Not Occupied	—	—

K134D Seat Bolster Memory Control Module - Driver



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 13235933

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series (BK with BK Cover)

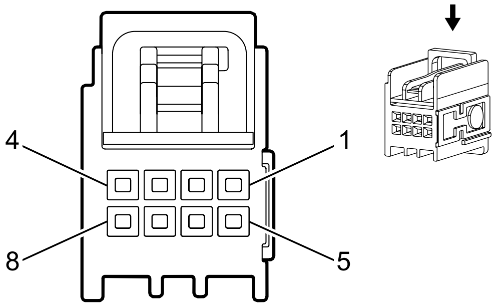
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K134D Seat Bolster Memory Control Module - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/BN	2240	Battery Positive Voltage	I	—
2	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	1150	Ground	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.5	VT	901	—	I	—
8	0.5	GN	903	—	I	—

K134P Seat Bolster Memory Control Module - Passenger



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 13235933

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 0.64 Series (BK with BK Cover)

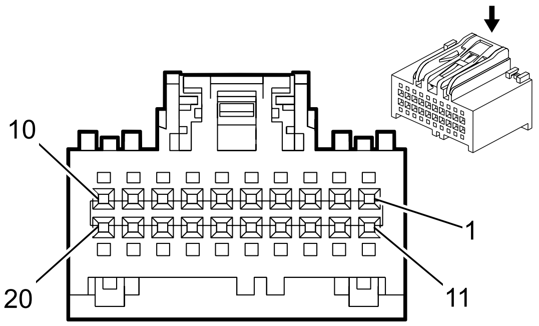
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K134P Seat Bolster Memory Control Module - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/WH	2240	Battery Positive Voltage	I	—
2	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	1250	Ground	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.5	VT	901	—	I	—
8	0.5	GN	903	—	I	—

K157 Video Processing Control Module X1



Connector Part Information

Harness Type: Body

OEM Connector: 15489824

Service Connector: 15126711

Description: 20-Way F 0.64 Series (BK)

Terminal Part Information

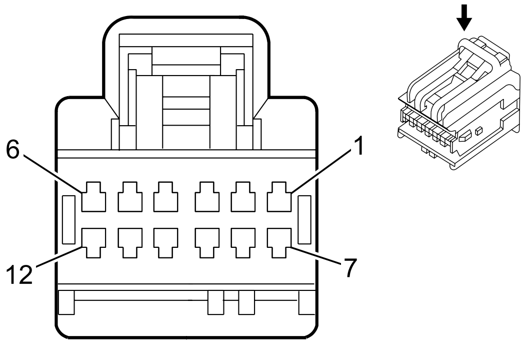
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

K157 Video Processing Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	3373	Auxiliary Video High Signal 2	I	—
2	0.35	BK/WH	2551	Signal Ground	I	—
3	0.35	BK/WH	2551	Signal Ground	I	—
4	0.35	D-BU	7641	Camera Rear Vision Signal +	I	—
5	0.35	WH/GN	2628	Left Side Vision Camera Video Signal (+)	I	—
6	0.35	BK/WH	2551	Signal Ground	I	—
7	0.35	BK/WH	2551	Signal Ground	I	—
8	0.35	WH/D-BU	2627	Right Side Vision Camera Video Signal (+)	I	—

9 - 10	—	—	—	Not Occupied	—	—
11	0.35	GY	3372	Auxiliary Video Low Signal 2	I	—
12	0.35	WH/BN	6201	Camera Control	I	—
13	0.35	WH/BN	6201	Camera Control	I	—
14	0.35	WH	7642	Camera Rear Vision Signal (-)	I	—
15	0.35	GY/GN	2625	Left Side Vision Camera Video Signal (-)	I	—
16	0.5	WH/BN	6201	Camera Control	I	—
17	0.5	WH/BN	6201	Camera Control	I	—
18	0.35	GY/D-BU	2626	Right Side Vision Camera Video Signal (-)	I	—
19 - 20	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X2



Connector Part Information

Harness Type: Body

OEM Connector: 13551678

Service Connector: 89047364

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

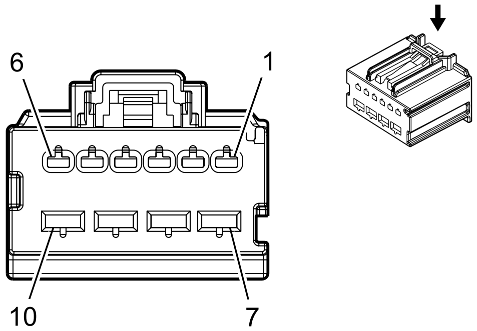
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13579945	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19328872	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

K157 Video Processing Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/VT	1640	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	III	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	GY/YE	6972	Camera Signal 2 +	I	—
7	0.75	BK	2550	Ground	II	—
8 - 10	—	—	—	Not Occupied	—	—
11	0.35	BARE	6974	Camera Low Reference	I	—

12	0.35	WH/D-BU	6973	Camera Signal 2	I	—

K169 Folding Seat Control Module - 3rd Row X1 (AS8)



Connector Part Information

Harness Type: —

OEM Connector: 13582822

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (GY)

Terminal Part Information

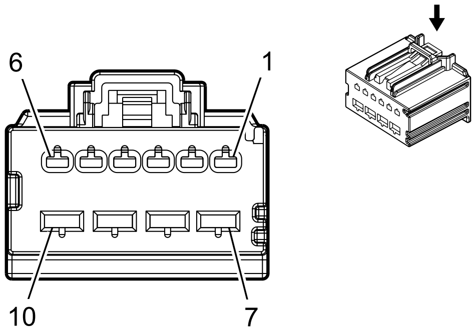
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K169 Folding Seat Control Module - 3rd Row X1 (AS8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN	4226	RH Third Row Seat Recline Rearward Lock Actuator Control	I	—
2	1.5	VT/GY	4225	RH Third Row Seat Recline Forward Lock Actuator Control	I	—
3	0.35	YE/BN	4214	LH Third Row Seat Recline Position Sensor Signal	I	—
4	0.35	WH/RD	4216	Seat Sensor Voltage Reference #1	I	—
5	0.35	WH/VT	4213	RH Third Row Seat Recline Position Sensor Signal	I	—
6	—	—	—	Not Occupied	—	—
7	1.5	GY/OG	4218	RH Third Row Seat Recline Rearward Control	I	—
8	1.5	BU	4217	RH Third Row Seat Recline Motor Forward Control	I	—

9	0.35	VT/RD	4215	Seat Sensor Voltage Reference #2	I	—
10	2.5	BK	1150	Ground	I	—

K169 Folding Seat Control Module - 3rd Row X2 (AS8)



Connector Part Information

Harness Type: —

OEM Connector: 13582823

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 1.5, 2.8 Series (BK)

Terminal Part Information

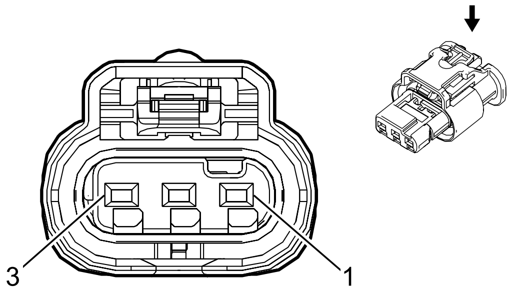
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

K169 Folding Seat Control Module - 3rd Row X2 (AS8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	4220	RH Third Row Seat Recline Rearward Signal	I	—
2	0.5	YE/BK	4219	RH Third Row Seat Recline Forward Signal	I	—
3	0.5	GN	4224	LH Third Row Seat Recline Rearward Signal	I	—
4	0.5	GN/BK	4223	LH Third Row Seat Recline Forward Signal	I	—
5	1.5	GY	4227	LH Third Row Seat Recline Forward Lock Actuator Control	I	—
6	1.5	YE/WH	4228	LH Third Row Seat Recline Rearward Lock Actuator Control	I	—
7	2.5	RD/BU	1240	Battery Positive Voltage	I	—
8	—	—	—	—	I	—

9	1.5	VT/BK	4221	LH Third Row Seat Recline Motor Forward Control	I	—
10	1.5	BN	4222	LH Third Row Seat Recline Motor Rearward Control	I	—

K171 Hands - Free Liftgate Sensor Control Module X1 (TC2)



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13868589

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.2 MCP Series, Sealed (BN)

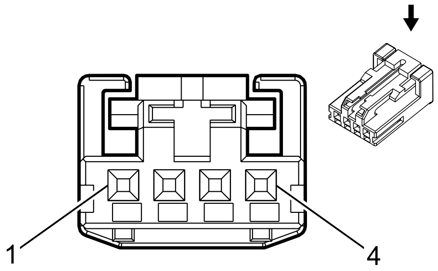
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

K171 Hands - Free Liftgate Sensor Control Module X1 (TC2)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/BN	4118	Local Interconnect Network Serial Data Bus 18	I	—
2	0.5	RD/GN	3140	Battery Positive Voltage	I	—
3	0.5	BK	1450	Ground	I	—

K175 Center Console Compartment Cooler Control Module



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13969166

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

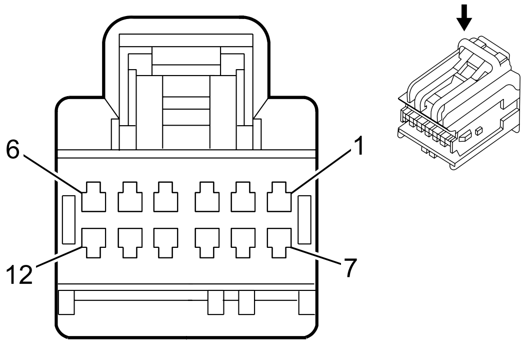
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

K175 Center Console Compartment Cooler Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	0.35	BN	6532	Compartment Cooler Control Signal	I	—
3	0.35	GY/BK	2546	Compartment Cooler Indicator Control	I	—
4	0.5	VT/BK	739	Run/Crank Ignition 1 Voltage	I	—

K182 Parking Assist Control Module X1 (UD5/UD7/UKG)



Connector Part Information

Harness Type: Body

OEM Connector: 13551678

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

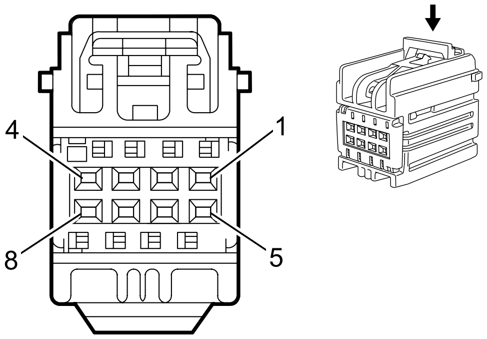
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

K182 Parking Assist Control Module X1 (UD5/UD7/UKG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD/GN	3140	Battery Positive Voltage	III	—
2	0.35	WH/BU	5986	Serial Data Communication Enable	III	—
3	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	III	—
4	0.35	GN	5060	Low Speed GMLAN Serial Data	III	—
5	0.5	BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
6	0.5	BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
7	0.75	BK/WH	2751	Signal Ground	III	BTM

	0.5	BK/WH	2751	Signal Ground	II	-BTM
7	0.75	BK/WH	2751	Signal Ground	III	BTM
	0.5	BK/WH	2751	Signal Ground	II	-BTM
8	0.35	GY/GN	2555	Rear Park Assist Disable Signal	II	—
9	—	—	—	—	I	—
10	0.35	BU/BN	3161	Parallel Park Assist Disable Switch Signal	II	—
11	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
12	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—

K182 Parking Assist Control Module X2 (UD5/UD7/UKG)



Connector Part Information

Harness Type: Body

OEM Connector: 13551679

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F YESC Kaizen Series (L-GY)

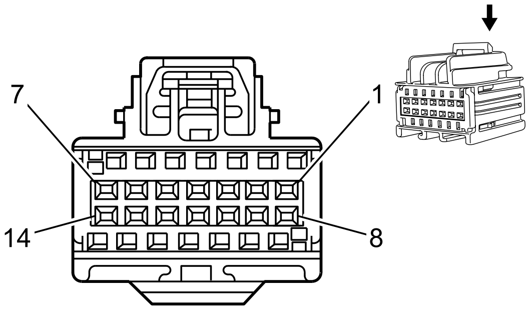
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

K182 Parking Assist Control Module X2 (UD5/UD7/UKG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	2375	Left Rear Corner Object Sensor Signal	I	—
2	0.5	BU	3157	Right Rear Supplemental Object Sensor Signal	I	—
3	0.5	YE/BU	2376	Left Rear Middle Object Sensor Signal	I	—
4	0.5	BN/WH	2374	Object Sensor Control	I	—
5	0.5	YE/VT	2378	Right Rear Corner Object Sensor Signal	I	—
6	0.5	GN	3156	Left Rear Supplemental Object Sensor Signal	I	—
7	0.5	YE/WH	2377	Right Rear Middle Object Sensor Signal	I	—
8	0.5	BK/GY	2379	Object Sensor Low Reference	I	—

K182 Parking Assist Control Module X3 (UD5/UD7/UKG)



Connector Part Information

Harness Type: Body

OEM Connector: 15491263

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F 0.64 Kaizen Series (BU)

Terminal Part Information

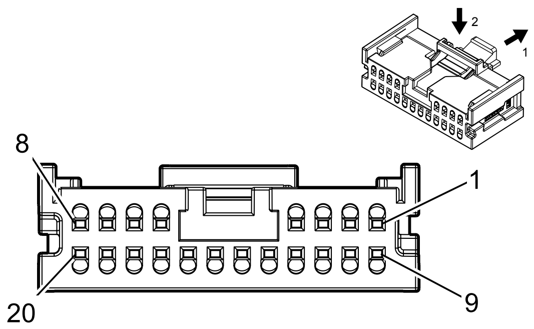
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

K182 Parking Assist Control Module X3 (UD5/UD7/UKG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/VT	5213	Front Parking Left/Right/Mid Sensor	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY	3154	Left Front Supplemental Object Sensor Signal	I	—
4	0.5	VT/WH	5215	Front Parking Left Corner Sensor	I	—
5	0.5	YE/GY	5216	Front Parking Left Mid Sensor	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	BK/BU	5214	Front Parking Sensor Low Reference	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	GN	3155	Right Front Supplemental Object Sensor Signal	I	—

11	0.5	WH/GY	5217	Front Parking Right Corner Sensor	I	—
12	0.5	VT/GY	5218	Front Parking Right Mid Sensor	I	—
13 - 14	—	—	—	Not Occupied	—	—

K188 Human Interface Control Module Bypass Module X1



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33167777

Service Connector: 13596105

Description: 20-Way F Mini 50 Series (BK)

Terminal Part Information

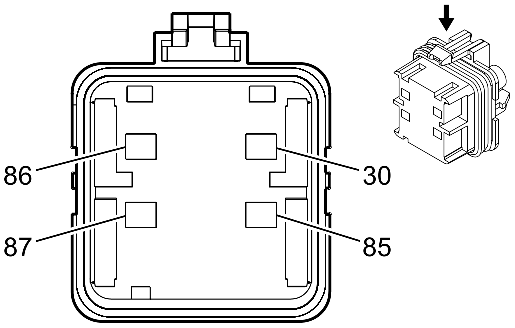
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579954	No Tool Required	J-38125-553	Not Available	Not Available	Not Available	Not Available

K188 Human Interface Control Module Bypass Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/GY	2840	Battery Positive Voltage	I	—
2	0.35	GY/VT	755	RAP Relay Coil Control	I	—
3	0.35	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	BK	2550	Ground	I	—
6	0.35	GY/YE	6972	Camera Signal 2 +	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	GY/YE	6972	Camera Signal 2 +	I	—
9	0.35	GN/WH	24	Backup Lamp Control	I	—

10 - 17	—	—	—	Not Occupied	—	—
18	0.35	WH/D-BU	6973	Camera Signal 2	I	—
19	0.35	D-BU/YE	6974	Camera Low Reference	I	—
20	0.35	WH/D-BU	6973	Camera Signal 2	I	—

KR98 Vehicle Level Control Compressor Relay



Connector Part Information

Harness Type: Chassis

OEM Connector: 12129716

Service Connector: 15306045

Description: 4-Way F 280 Metri-Pack Flexlock Series, Sealed (GY)

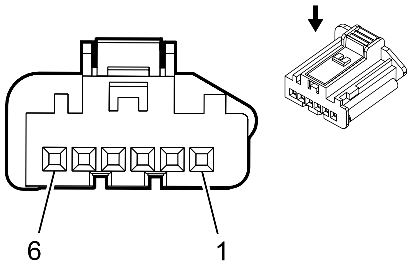
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

KR98 Vehicle Level Control Compressor Relay

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
30	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—
85	0.5	BN/YE	1112	Damping Relay Coil Control	I	Z85
	0.5	BK	1750	Ground	I	Z95
86	0.5	VT/BK	739	Run/Crank Ignition 1 Voltage	I	Z85
	0.5	VT/D-BU	5956	Leveling Compressor Relay Coil Control	I	Z95
87	2.5	WH/VT	2248	Real Time Damping Leveling Motor Control	I	—

M4 Air Inlet Door Actuator



Connector Part Information

Harness Type: —

OEM Connector: 12759936

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

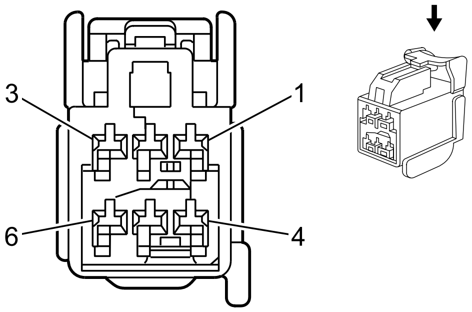
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M4 Air Inlet Door Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—
2	0.35	VT/GN	1838	Recirculation Door Position Signal	I	—
3	0.35	GY/RD	598	5V Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GN	1614	Recirculation Door Control	I	—
6	0.35	YE/BK	2274	Recirculation Door Control	I	—

M5 Adjustable Pedal Motor



Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 10846805

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 1.5 Kaizen Series (L-GY)

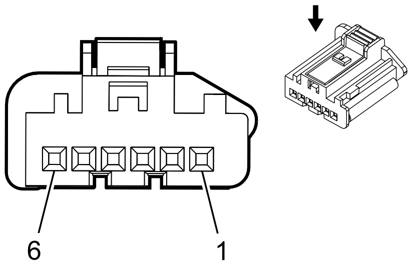
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M5 Adjustable Pedal Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/VT	5130	Adjustable Pedal Actuator Forward Control	I	—
2	0.5	D-BU	5952	Adjustable Pedal Position Sensor Brake Signal	I	—
3	0.5	BK/GY	6206	Memory Sensor Low Reference	I	—
4	1.5	YE	5129	Adjustable Pedal Actuator Rearward Control	I	—
5	0.5	WH/RD	6207	Memory Sensor High Reference	I	—
6	—	—	—	Not Occupied	—	—

M6L Air Temperature Door Actuator - Left



Connector Part Information

Harness Type: —

OEM Connector: 12759936

Service Connector: Service by Harness - See Part Catalog

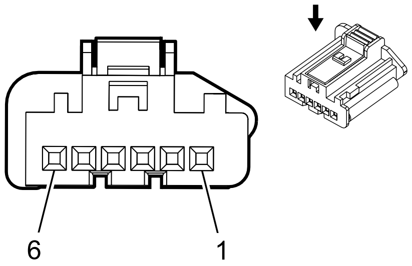
Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M6L Air Temperature Door Actuator - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—
2	0.35	BU/YE	733	Air Temperature Door Position Signal	I	—
3	0.35	GY/RD	598	5V Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	BU/BN	1199	Air Temperature Door Control	I	—
6	0.35	GY/GN	2210	Air Temperature Door Control	I	—



Connector Part Information

Harness Type: —

OEM Connector: 12759936

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

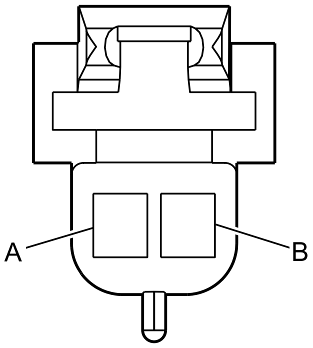
Terminal Part Information

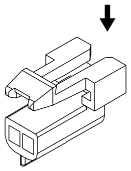
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M6R Air Temperature Door Actuator - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—
2	0.35	BN/BU	1646	Passenger Air Temperature Door Position Signal	I	—
3	0.35	GY/RD	598	5V Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	WH/BK	1236	Passenger Air Temperature Door Control	I	—
6	0.35	GY/BK	2778	Passenger Air Temperature Motor Control	I	—

M7 Transmission Shift Lock Control Solenoid Actuator





Connector Part Information

Harness Type: —

OEM Connector: 12052832

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 Metri-Pack Series (BK)

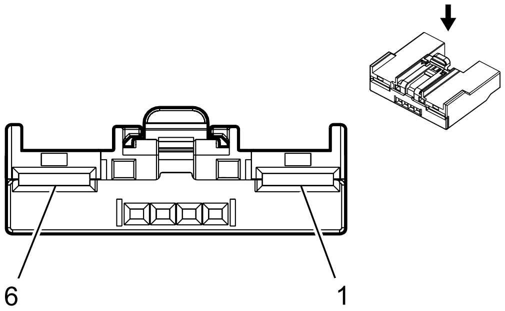
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M7 Transmission Shift Lock Control Solenoid Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	YE/WH	816	Brake Transmission Shift Interlock Solenoid Control	I	—
B	0.35	BK/WH	1851	Signal Ground	I	—

M8 Blower Motor



Connector Part Information

Harness Type: —

OEM Connector: 13582015

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 GET, 6.3 Series (BK)

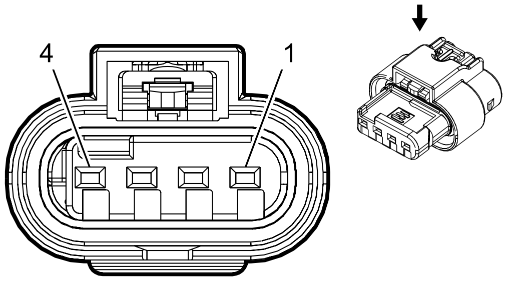
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M8 Blower Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4.0	RD/VT	542	Battery Positive Voltage	I	—
2	0.35	BU/GY	754	Blower Motor Speed Control	I	—
3 - 5	—	—	—	Not Occupied	—	—
6	5.0	BK	1050	Ground	I	—

M26 Front Axle Engagement Actuator



Connector Part Information

Harness Type: Transfer Case

OEM Connector: 13817132

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 1.2 MCP Series, Sealed (BK)

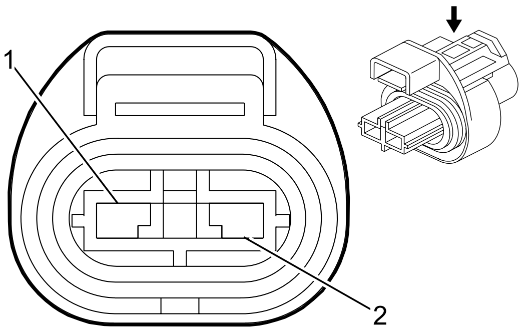
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M26 Front Axle Engagement Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	I	—
2	0.5	GY/BK	1570	Front Axle Actuator Control	I	—
3	0.5	YE/WH	1695	Four Wheel Drive Wheel Lock Indicator Control	I	—
4	0.5	BK	550	Ground	I	—

M27 Fuel Fill Door Unlatch Actuator



Connector Part Information

Harness Type: Chassis

OEM Connector: 13548106

Service Connector: 13314083

Description: 2-Way F 1.2 Timer Series, Sealed (BK)

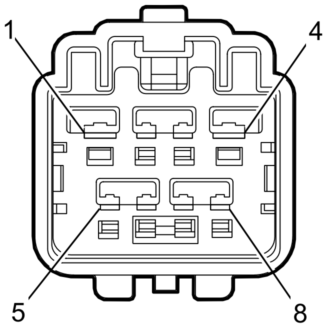
Terminal Part Information

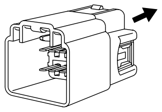
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M27 Fuel Fill Door Unlatch Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/YE	294	Door Lock Actuator Unlock Control	I	—
2	0.75	GY	5911	Door Lock Actuator Lock Control 2	I	—

M31 Liftgate Motor





Connector Part Information

Harness Type: Liftgate

OEM Connector: 10847005

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 1.5, 2.8 Kaizen Series (L-GY)

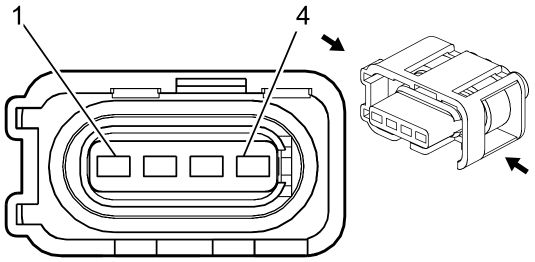
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M31 Liftgate Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	WH	5798	Lift Gate Open/Close Motor Open Control	II	—
2	0.35	BN/RD	5803	Lift Gate Position Sensor 5V Reference	I	—
3	0.35	BK/GN	5804	Lift Gate Position Sensor Low Reference	I	—
4	2	BN/WH	5799	Lift Gate Open/Close Motor Close Control	II	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.35	D-BU/WH	5805	Lift Gate Position Sensor Signal 1	I	—
8	0.35	BN/YE	5806	Lift Gate Position Sensor Signal 2	I	—

M33 Liftgate Window Latch Assembly



Connector Part Information

Harness Type: —

OEM Connector: 88988881

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F Micro-Pack Timer III Series, Sealed (NA)

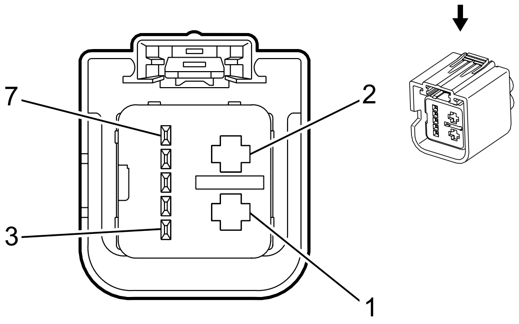
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M33 Liftgate Window Latch Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU/YE	6795	Lift Glass/Rear Compartment Lid Motor Release Control 2	I	—
2	0.5	BK	1450	Ground	I	—
3 - 4	—	—	—	Not Occupied	—	—

M35P Window Motor Module - Passenger



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 15504732

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed (BK)

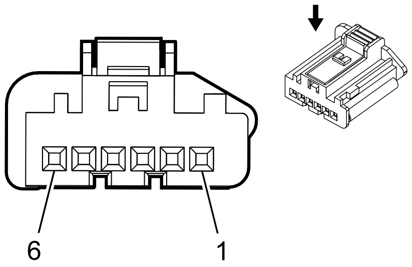
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M35P Window Motor Module - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1250	Ground	I	—
2	2.5	RD/WH	1340	Battery Positive Voltage	I	—
3	0.35	YE/BK	166	Power Window Master Switch Right Front Up Signal	II	—
4	0.5	GN/YE	6134	Local Interconnect Network Serial Data Bus 3	II	—
5	0.35	VT/GY	2765	Power Window Switch Right Front Express Signal	II	—
6	0.35	GY	746	Right Front Door Ajar Switch Signal	II	—
7	0.35	BN/YE	167	Power Window Master Switch Right Front Down Signal	II	—

M37L Mode Door Actuator - Left



Connector Part Information

Harness Type: —

OEM Connector: 12759936

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (BK)

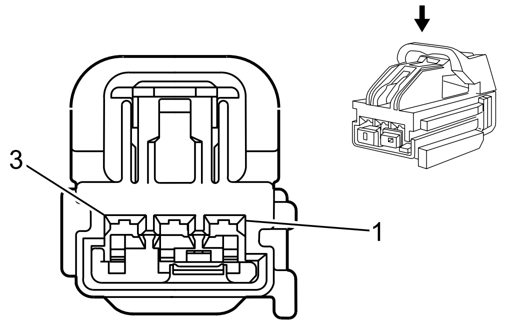
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

M37L Mode Door Actuator - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/YE	1791	Air Temperature Door Control Low Reference	I	—
2	0.35	WH/GN	2275	Mode 1 Valve Position Sensor Signal	I	—
3	0.35	GY/RD	598	5V Reference	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	WH	119	Mode Door Control	I	—
6	0.35	YE/BN	2273	Mode Door Control	I	—

M45 Rear Wiper Motor



Connector Part Information

Harness Type: Liftgate

OEM Connector: 10847008

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.5 Kaizen Series (L-GY)

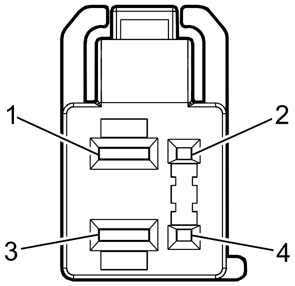
Terminal Part Information

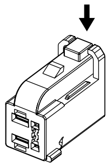
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M45 Rear Wiper Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1450	Ground	II	—
2	0.5	GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
3	0.75	RD/YE	3040	Battery Positive Voltage	II	—

M50D Seat Front Vertical Motor - Driver





Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

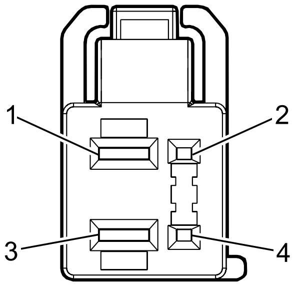
Terminal Part Information

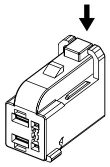
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M50D Seat Front Vertical Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/BN	286	Driver Power Seat Front Vertical Motor Up Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	BU/VT	287	Driver Power Seat Front Vertical Motor Down Control	I	—
4	0.5	BN/WH	557	Memory Seat Front Vertical Motor Position Sensor Signal	II	—

M50P Seat Front Vertical Motor - Passenger





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

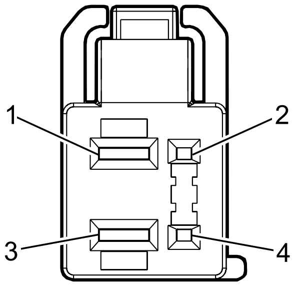
Terminal Part Information

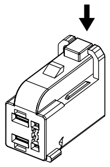
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M50P Seat Front Vertical Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/VT	297	Passenger Power Seat Front Vertical Motor Up Control	I	-Y91/Z75
	1.5	GN/BU	298	Passenger Power Seat Front Vertical Motor Down Control	I	Y91/Z75-ULT
2	—	—	—	Not Occupied	—	—
3	1.5	GN/BU	298	Passenger Power Seat Front Vertical Motor Down Control	I	-Y91/Z75
	1.5	GN/VT	297	Passenger Power Seat Front Vertical Motor Up Control	I	Y91/Z75-ULT
4	—	—	—	Not Occupied	—	—

M51D Seat Horizontal Motor - Driver





Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

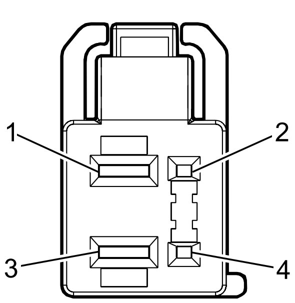
Terminal Part Information

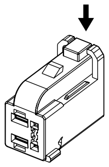
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M51D Seat Horizontal Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE/BU	285	Driver Power Seat Horizontal Motor Forward Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	GY/GN	284	Driver Power Seat Horizontal Motor Rearward Control	I	—
4	0.5	GN	569	Memory Seat Horizontal Motor Position Sensor Signal	II	—

M51P Seat Horizontal Motor - Passenger





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

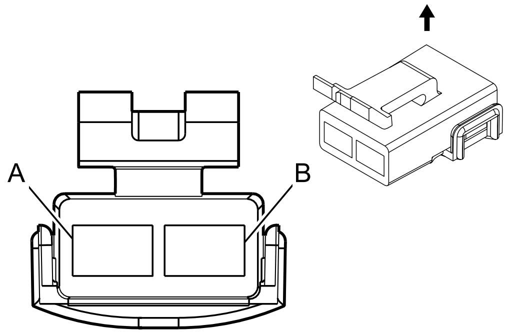
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M51P Seat Horizontal Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	ULT
	1.5	YE/BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	-Y91/Z75
2	—	—	—	Not Occupied	—	—
3	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	ULT
	1.5	YE/BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	-Y91/Z75
4	—	—	—	Not Occupied	—	—

M52D Seat Lumbar Support Horizontal Motor - Driver



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 12020556

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 480 Metri-Pack Series (BK)

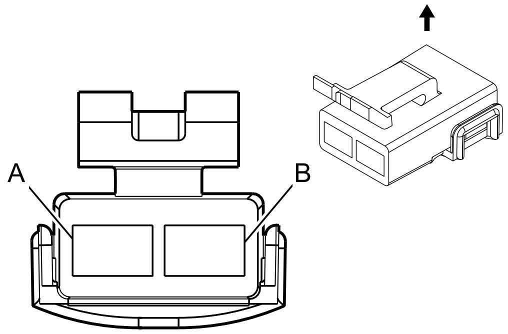
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M52D Seat Lumbar Support Horizontal Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	BU	611	Driver Power Seat Lumbar Motor Forward Control	I	—
B	1.5	VT	610	Driver Power Seat Lumbar Motor Rearward Control	I	—

M52P Seat Lumbar Support Horizontal Motor - Passenger



Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 12020556

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 480 Metri-Pack Series (BK)

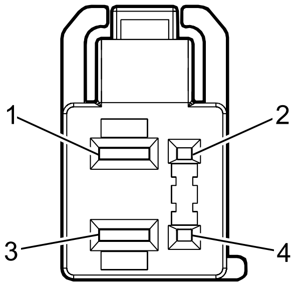
Terminal Part Information

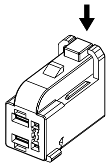
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M52P Seat Lumbar Support Horizontal Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	BU	211	Passenger Power Seat Lumbar Motor Forward Control	I	—
B	1.5	VT	210	Passenger Power Seat Lumbar Motor Rearward Control	I	—

M55D Seat Rear Vertical Motor - Driver





Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

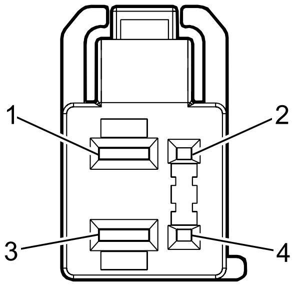
Terminal Part Information

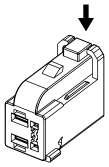
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M55D Seat Rear Vertical Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY/BU	283	Driver Power Seat Rear Vertical Motor Down Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	YE	282	Driver Power Seat Rear Vertical Motor Up Control	I	—
4	0.5	YE/BU	568	Memory Seat Rear Vertical Motor Position Sensor Signal	II	—

M55P Seat Rear Vertical Motor - Passenger





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

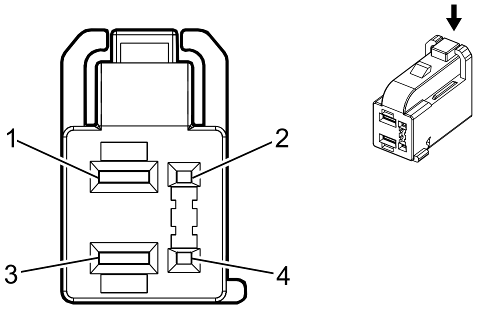
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M55P Seat Rear Vertical Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/WH	288	Passenger Power Seat Rear Vertical Motor Up Control	I	-Y91/Z75
	1.5	BU/WH	289	Passenger Power Seat Rear Vertical Motor Down Control	I	Y91/Z75-UTL
2	—	—	—	Not Occupied	—	—
3	1.5	BU/WH	289	Passenger Power Seat Rear Vertical Motor Down Control	I	-Y91/Z75
	1.5	GN/WH	288	Passenger Power Seat Rear Vertical Motor Up Control	I	Y91/Z75-UTL
4	—	—	—	Not Occupied	—	—

M56D Seat Recline Motor - Driver



Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

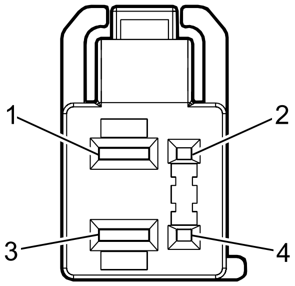
Terminal Part Information

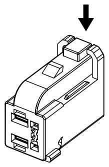
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M56D Seat Recline Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/YE	276	Driver Power Seat Recline Motor Forward Control	I	—
2	0.35	WH/RD	3298	Memory Sensor High Reference 2	II	—
3	1.5	BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	—
4	0.35	WH/BK	570	Driver Memory Seat Recline Motor Position Sensor Signal	II	—

M56P Seat Recline Motor - Passenger





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 3-023-66-52

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64, 2.8 Series (BN)

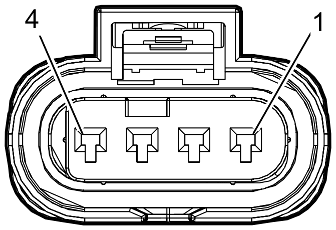
Terminal Part Information

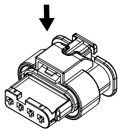
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M56P Seat Recline Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN	76	Passenger Power Seat Recline Motor Forward Control	I	-Y91/Z75
	1.5	BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	Y91/Z75-ULT
2	—	—	—	Not Occupied	—	—
3	1.5	BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	-Y91/Z75
	1.5	GN	76	Passenger Power Seat Recline Motor Forward Control	I	Y91/Z75-ULT
4	—	—	—	Not Occupied	—	—

M60A Active Grille Air Shutter 1 Motor Module





Connector Part Information

Harness Type: Active Grille Air Shutter Jumper

OEM Connector: 13576419

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 1.2 MCON Series (NA)

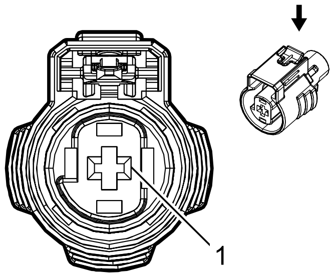
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

M60A Active Grille Air Shutter 1 Motor Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BU	5290	Powertrain Main Relay Fused Supply 1	I	—
2	0.5	GN/VT	4621	Local Interconnect Network Serial Data Bus 21	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	250	Ground	I	—

M64 Starter Motor ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 15526411

Service Connector: 19300471

Description: 1-Way F 2.8 MCP Series, Sealed (BK)

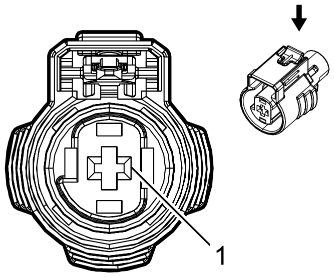
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M64 Starter Motor ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	YE	6	Starter Solenoid Crank Ignition Voltage	I	—

M64 Starter Motor (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 15526411

Service Connector: 19300471

Description: 1-Way F 2.8 MCP Series, Sealed (BK)

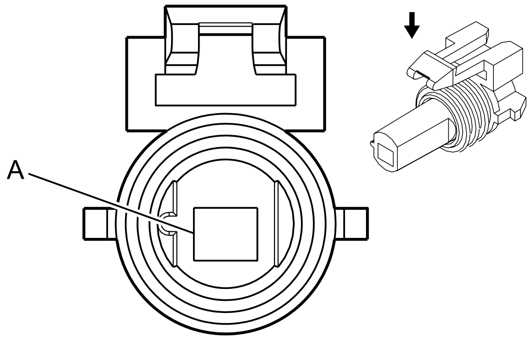
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M64 Starter Motor (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	YE	6	Starter Solenoid Crank Ignition Voltage	I	—

M64 Starter Motor (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 12089916

Service Connector: 13584479

Description: 1-Way F 280 Metri-Pack Series, Sealed (GY)

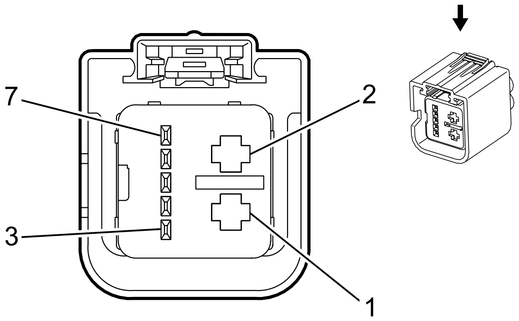
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M64 Starter Motor (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	4	YE	6	Starter Solenoid Crank Ignition Voltage	I	—

M74D Window Motor - Driver



Connector Part Information

Harness Type: Driver Door

OEM Connector: 15504732

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed (BK)

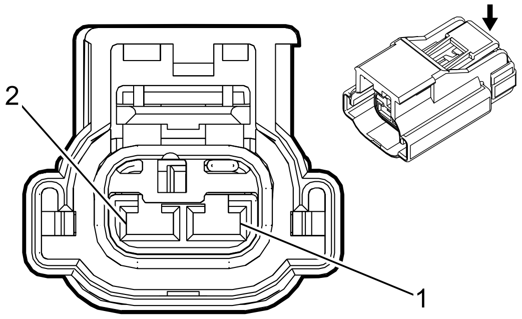
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74D Window Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1150	Ground	I	—
2	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—
3	0.35	GN/WH	1300	Power Window Master Switch Left Front Up Signal	II	—
4	0.5	GN/YE	6134	Local Interconnect Network Serial Data Bus 3	II	—
5	0.35	GN/VT	7628	Power Window Motor Left Front Express Control	II	—
6	0.35	GY	745	Left Front Door Ajar Switch Signal	II	—
7	0.35	GY	1136	Power Window Master Switch Left Front Down Signal	II	—

M74LR Window Motor - Left Rear



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13896059

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 2.8 APEX Series, Sealed (BK)

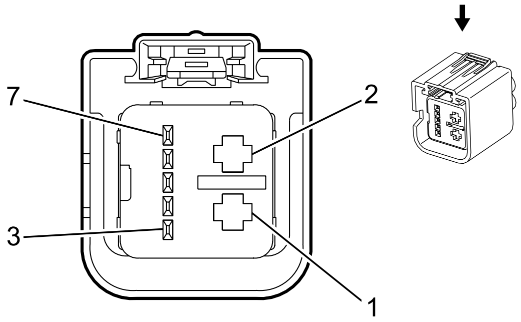
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74LR Window Motor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
2	2.5	YE/D-BU	669	Power Window Motor Left Rear Down Control	I	—

M74P Window Motor - Passenger



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 15504732

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed (BK)

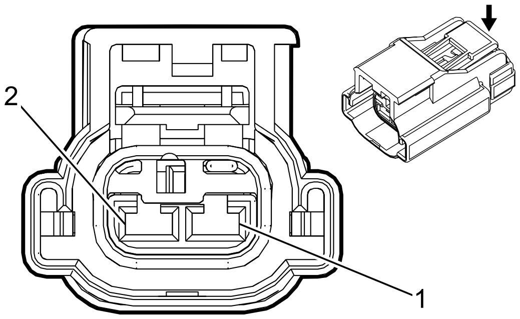
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74P Window Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1250	Ground	I	—
2	2.5	RD/WH	1340	Battery Positive Voltage	I	—
3	0.35	YE/BK	166	Power Window Master Switch Right Front Up Signal	I	—
4	0.5	GN/YE	6134	Local Interconnect Network Serial Data Bus 3	I	—
5	0.35	VT/GN	2765	Power Window Switch Right Front Express Signal	I	—
6	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—
7	0.35	BN/YE	167	Power Window Master Switch Right Front Down Signal	I	—

M74RR Window Motor - Right Rear



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13896059

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 2.8 APEX Series, Sealed (BK)

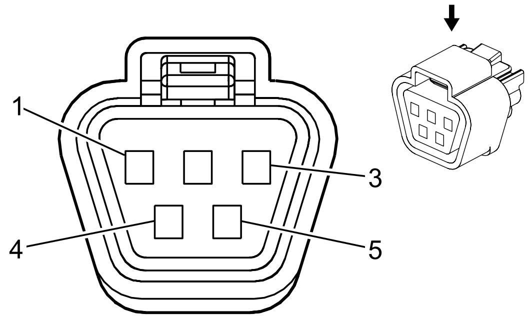
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M74RR Window Motor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
2	2.5	GN/BK	671	Power Window Motor Right Rear Down Control	I	—

M75 Windshield Wiper Motor



Connector Part Information

Harness Type: Body

OEM Connector: 15316488

Service Connector: 13587179

Description: 5-Way F 090 Series, Sealed (GY)

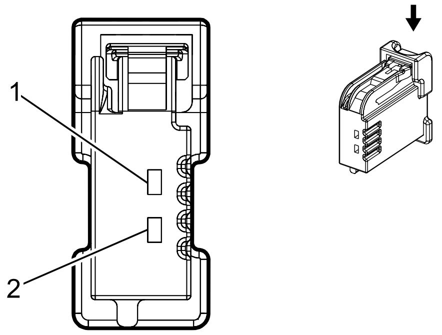
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-18 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M75 Windshield Wiper Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE/BN	95	Windshield Wiper Motor Low Speed Control	II	—
2	0.5	BK	1850	Ground	I	—
3	0.5	BN/GN	196	Windshield Wiper Motor Park Switch Signal	I	—
4	1	WH	92	Windshield Wiper Motor High Speed Control	II	—
5	1	BK	550	Ground	II	—

M91 Instrument Panel Compartment Door Unlatch Actuator



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

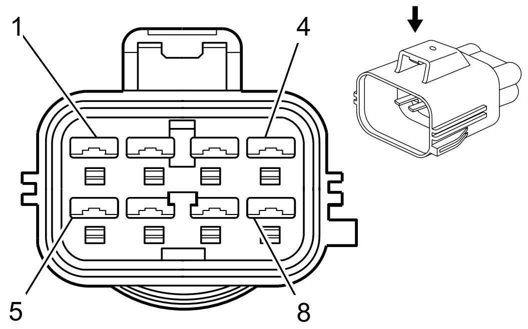
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M91 Instrument Panel Compartment Door Unlatch Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/GY	4048	Glove Box Door Release Control	I	—
2	1	BK	1050	Ground	I	—

M95L Assist Step - Left



Connector Part Information

Harness Type: Chassis

OEM Connector: 15419459

Service Connector: 19167744

Description: 8-Way M 2.8 Series, Sealed (D-GY)

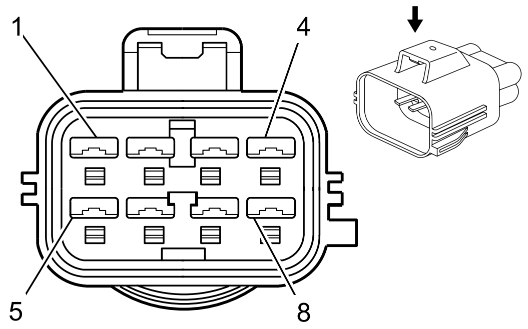
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M95L Assist Step - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	WH/BN	7471	Articulating Running Boards Motor Left Control Extend	II	—
2	0.5	VT/RD	7468	Running Boards Motor Hall Sensor Left 5V Reference	I	—
3	0.5	YE	7467	Running Boards Motor Hall Sensor Left Signal	I	—
4	0.5	YE/BN	7466	Running Boards Motor Hall Sensor Left Low Reference	I	—
5	2	GY	7472	Articulating Running Boards Motor Left Control Retract	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
8	0.5	BK	1750	Ground	I	—

M95R Assist Step - Right



Connector Part Information

Harness Type: Chassis

OEM Connector: 15419459

Service Connector: 19167744

Description: 8-Way M 2.8 Series, Sealed (D-GY)

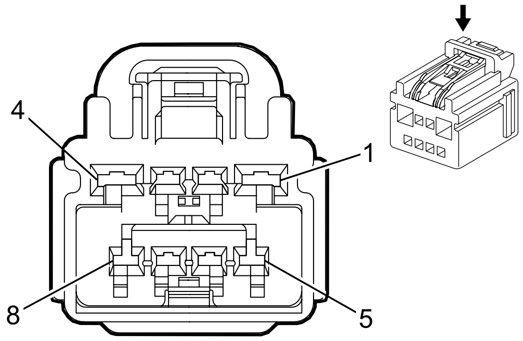
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M95R Assist Step - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	D-BU	7470	Articulating Running Boards Motor Right Control Extend	II	—
2	0.5	GN/RD	7464	Running Boards Motor Hall Sensor Right 5V Reference	I	—
3	0.5	VT	7465	Running Boards Motor Hall Sensor Right Signal	I	—
4	0.5	YE/BK	7463	Running Boards Motor Hall Sensor Right Low Reference	I	—
5	2	GN	7469	Articulating Running Boards Motor Right Control Retract	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	GY/GN	5996	Driver Outside Rear View Mirror Puddle Lamp Control	I	—
8	0.5	BK	1750	Ground	I	—

M101L Seat Belt Retractor Motor Module - Left



Connector Part Information

Harness Type: Body

OEM Connector: 10847007

Service Connector: 19153181

Description: 8-Way F YESC Kaizen Series (L-GY)

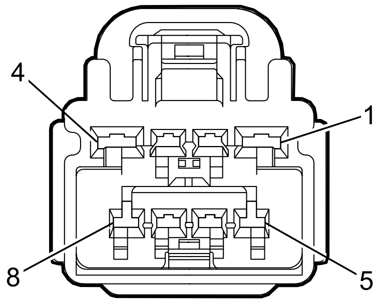
Terminal Part Information

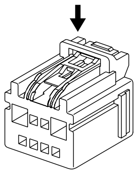
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M101L Seat Belt Retractor Motor Module - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	1150	Ground	II	—
2	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
3	—	—	—	Not Occupied	—	—
4	4	RD/WH	4042	Battery Positive Voltage	II	—
5	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
7	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
8	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—

M101R Seat Belt Retractor Motor Module - Right





Connector Part Information

Harness Type: Body

OEM Connector: 10847007

Service Connector: 19153181

Description: 8-Way F YESC Kaizen Series (L-GY)

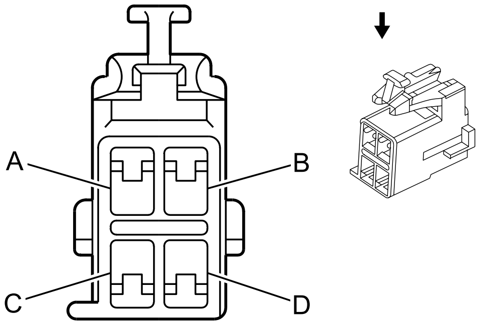
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M101R Seat Belt Retractor Motor Module - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	BK	1250	Ground	II	—
2	0.35	WH/D-BU	5986	Serial Data Communication Enable	I	—
3	—	—	—	Not Occupied	—	—
4	4	RD/GY	1042	Battery Positive Voltage	II	—
5	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
6	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	I	—
7	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—
8	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	I	—

M107LR Folding Seat Motor - 2nd Row Left



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 12129136

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 280 Metri-Pack Flexlock Series (BK)

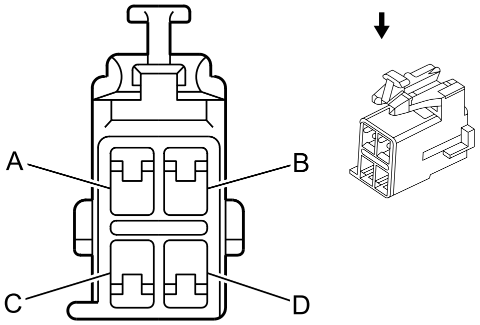
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M107LR Folding Seat Motor - 2nd Row Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	RD/BU	1240	Battery Positive Voltage	I	—
B	0.75	GY	1150	Ground	I	—
C	0.5	GN	6808	Left Rear Seat Fold Tumble Control	I	—
D	—	—	—	Not Occupied	—	—

M107RR Folding Seat Motor - 2nd Row Right



Connector Part Information

Harness Type: Rear Seat

OEM Connector: 12129136

Service Connector: Service by Harness - See Part Catalog

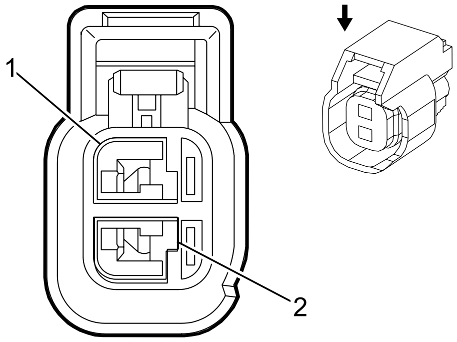
Description: 4-Way F 280 Metri-Pack Flexlock Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

M107RR Folding Seat Motor - 2nd Row Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	RD/BU	1240	Battery Positive Voltage	I	—
B	0.75	GY	1250	Ground	I	—
C	0.5	BN/WH	6809	Right Rear Seat Fold Tumble Control	I	—
D	—	—	—	Not Occupied	—	—



Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13594801

Service Connector: 13585854

Description: 2-Way F 150 GT Series, Sealed (BK)

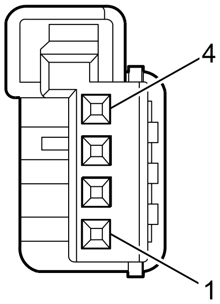
Terminal Part Information

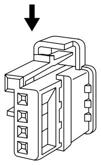
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P12 Horn

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	150	Ground	I	—
2	0.75	BN/GY	29	Horn Control	I	—

P14 Passenger Air Bag Disabled Indicator (DRZ)





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 10812166

Service Connector: 19119349

Description: 4-Way F 0.64 Micro-Quadlock Series (GY)

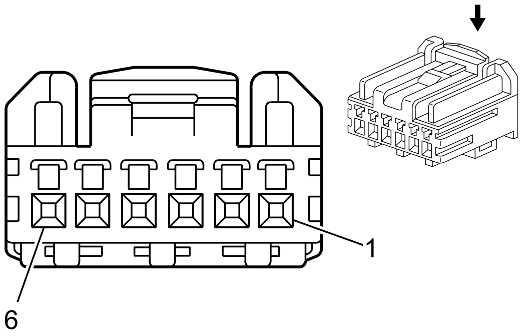
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P14 Passenger Air Bag Disabled Indicator (DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
3	0.35	GN	2308	Passenger Air Bag Off Indicator Control	I	—
4	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—

P14 Passenger Air Bag Disabled Indicator (-DRZ)



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13608102

Service Connector: 19153174

Description: 6-Way F 0.64 HCM Series (NA)

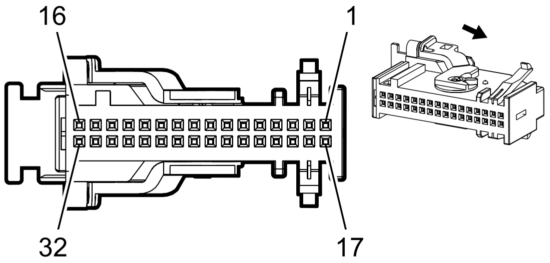
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P14 Passenger Air Bag Disabled Indicator (-DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	2307	Passenger Air Bag On Indicator Control	I	—
2	0.5	BK	1050	Ground	I	—
3	0.35	GN	2308	Passenger Air Bag Off Indicator Control	I	—
4	0.35	VT/WH	1139	Run/Crank Ignition 1 Voltage	I	—
5	0.35	VT/WH	5234	Passenger Seat Belt Indicator Control	I	—
6	—	—	—	Not Occupied	—	—

P16 Instrument Cluster



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12198036

Service Connector: 88988405

Description: 32-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

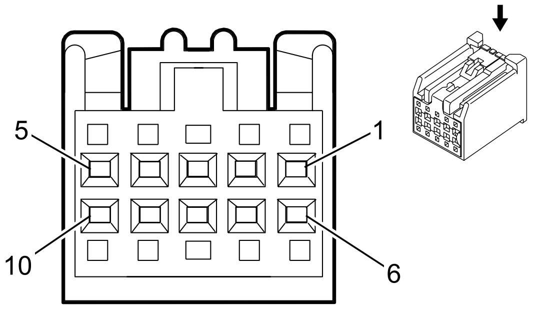
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575522	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575782	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

P16 Instrument Cluster

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
2	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
3	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	WH/VT	3999	MOST Control	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	RD/GY	2840	Battery Positive Voltage	II	—
8	0.5	VT/BK	1639	Run/Crank Ignition 1 Voltage	I	—
9 - 11	—	—	—	Not Occupied	—	—

9 - 11	—	—	—	Not Occupied	—	—
12	0.35	GY/YE	3885	Forward Collision Alert LED Control	I	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.35	BN/WH	419	Check Engine Indicator Control	I	—
17	0.5	GY/VT	3998	MOST Serial Data (+)	I	—
18	0.5	WH/GN	3997	MOST Serial Data (-)	I	—
19	0.5	BK/WH	1851	Signal Ground	I	—
20	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
21	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
22 - 23	—	—	—	Not Occupied	—	—
24	0.35	VT	185	Low Washer Fluid Indicator Control	I	—
25	0.35	BK/D-BU	61	Outside Ambient Temperature Sensor Low Reference	I	—
26	—	—	—	Not Occupied	—	—
27	0.35	D-BU/GY	636	Outside Ambient Air Temperature Sensor Signal	I	—
28 - 29	—	—	—	Not Occupied	—	—
30	0.35	WH/GN	3535	Reflected LED Display Dimming Control	I	—
31 - 32	—	—	—	Not Occupied	—	—

P17 Info Display Module X1 (X88/Z88)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13815336

Service Connector: 13577390

Description: 10-Way F 0.64 Kaizen Series (BK)

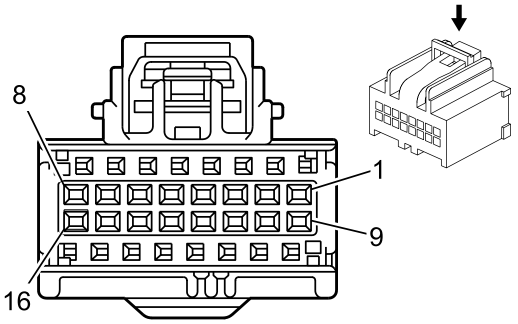
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

P17 Info Display Module X1 (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GY	2840	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	BK	2550	Ground	I	—

P17 Info Display Module X1 (Z75)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15491285

Service Connector: 15136073

Description: 16-Way F 0.64 Kaizen Series (BK)

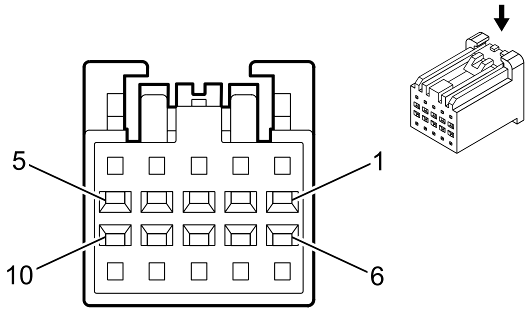
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

P17 Info Display Module X1 (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 5	—	—	—	Not Occupied	—	—
6	0.5	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
7	0.5	GN/D-BU	7532	Local Interconnect Network Serial Data Bus 10	I	—
8	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
9	0.5	RD/GY	2840	Battery Positive Voltage	I	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	II	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.35	BK	2550	Ground	I	—

P17 Info Display Module X2 (X88/Z88)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13876499

Service Connector: 13581139

Description: 10-Way F 0.64 Kaizen Series (GY)

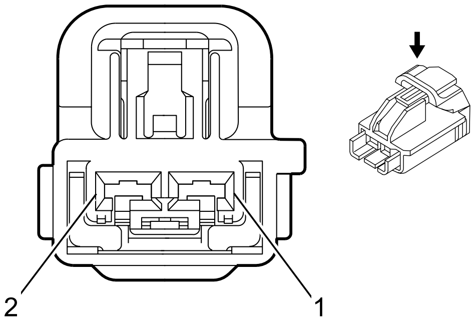
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

P17 Info Display Module X2 (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GY	2840	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
4 - 8	—	—	—	Not Occupied	—	—
9	0.35	GN/YE	7531	Local Interconnect Network Serial Data Bus 9	I	—
10	0.35	BK	2550	Ground	I	—

P19AC Speaker - Subwoofer



Connector Part Information

Harness Type: Body

OEM Connector: 10846819

Service Connector: 19301720

Description: 2-Way F YESC Kaizen Series (L-GY)

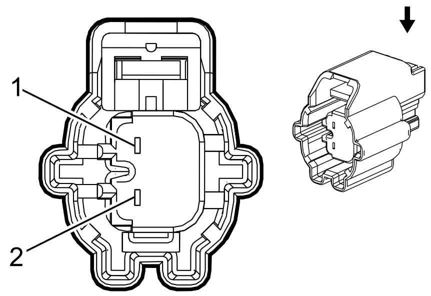
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AC Speaker - Subwoofer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/GY	346	Left/Rear Subwoofer Speaker Control (+)	I	—
2	2.5	GY/BK	315	Right Subwoofer Speaker (-) Low Reference	I	—

P19AG Speaker - Left Front Door



Connector Part Information

Harness Type: Driver Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

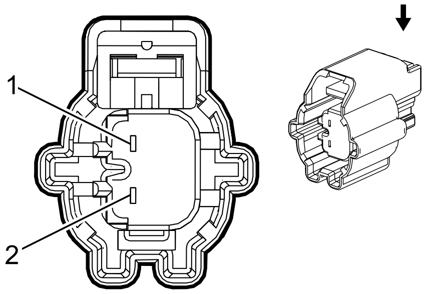
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AG Speaker - Left Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
2	1	D-BU	201	Left Front Speaker Control (+) 1	I	—

P19AH Speaker - Right Front Door



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

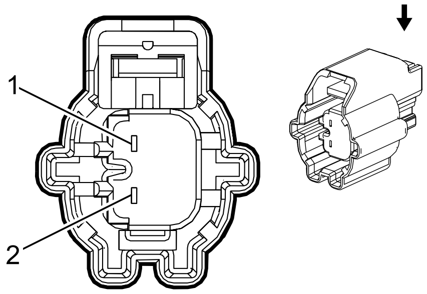
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AH Speaker - Right Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
2	1	YE	200	Right Front Speaker Control (+) 1	I	—

P19AL Speaker - Left Rear Door



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

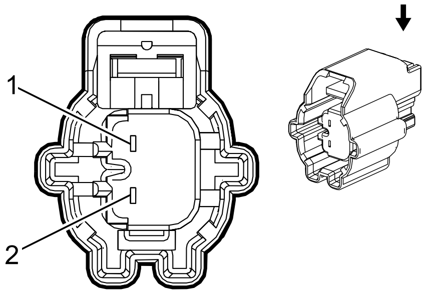
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AL Speaker - Left Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	GN/BK	116	Left Rear Speaker Signal (-)	I	—
2	1	GN	199	Left Rear Speaker Control (+)	I	—

P19AM Speaker - Right Rear Door



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

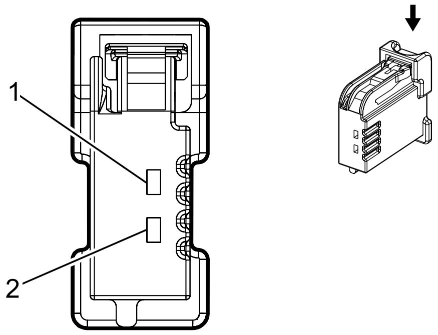
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AM Speaker - Right Rear Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
2	1	WH	46	Right Rear Speaker Control (+)	I	—

P19AN Speaker - Left Rear Trim Panel



Connector Part Information

Harness Type: Body

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

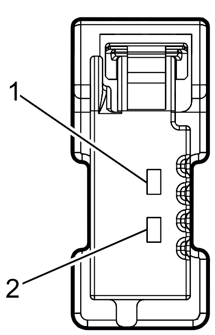
Terminal Part Information

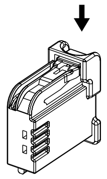
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AN Speaker - Left Rear Trim Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	GN/BK	116	Left Rear Speaker Signal (-)	I	UQA
	1	WH/BK	1959	Left Rear Midrange Speaker (-) Low Reference	I	UQS
2	1	GN	199	Left Rear Speaker Control (+)	I	UQA
	1	YE/BN	1859	Left Rear Midrange Speaker Control (+)	I	UQS

P19AP Speaker - Right Rear Trim Panel





Connector Part Information

Harness Type: Body

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

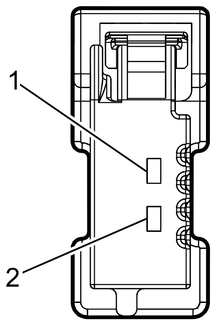
Terminal Part Information

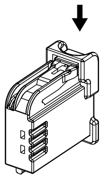
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19AP Speaker - Right Rear Trim Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	D-BU/BK	115	Right Rear Speaker Signal (-)	I	UQA
	1	WH/BK	1959	Left Rear Midrange Speaker (-) Low Reference	I	UQS
2	1	WH	46	Right Rear Speaker Control (+)	I	UQA
	1	YE/BN	1859	Left Rear Midrange Speaker Control (+)	I	UQS

P19B Speaker - Center Instrument Panel





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

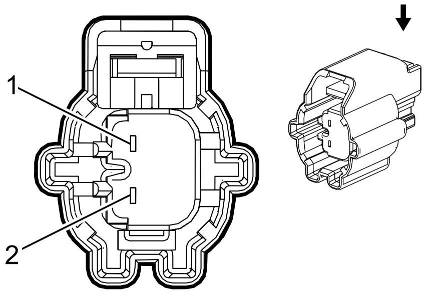
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19B Speaker - Center Instrument Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU/YE	1960	Front Center Speaker (-) Low Reference	I	—
2	0.75	YE/WH	1860	Front Center Speaker Control (+)	I	—

P19DD Speaker - Left Front Door Woofer (UQH)



Connector Part Information

Harness Type: Driver Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

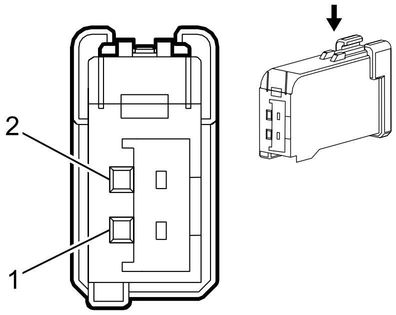
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19DD Speaker - Left Front Door Woofer (UQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BN/BU	118	Left Front Speaker Signal (-) 1	I	—
2	1	BU	201	Left Front Speaker Control (+) 1	I	—

P19HD Speaker - Left Front Door Tweeter (UQH)



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13595633

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series (BK)

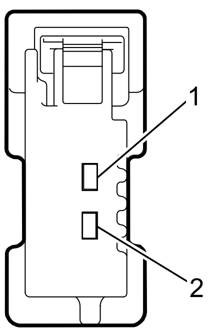
Terminal Part Information

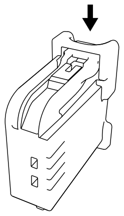
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19HD Speaker - Left Front Door Tweeter (UQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/BU	118	Left Front Speaker Signal (-) 1	I	—
2	0.75	BU	201	Left Front Speaker Control (+) 1	I	—

P19J Speaker - Left Instrument Panel (UQ3)





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13595207

Service Connector: 13584097

Description: 2-Way F 1.5 Series (BK)

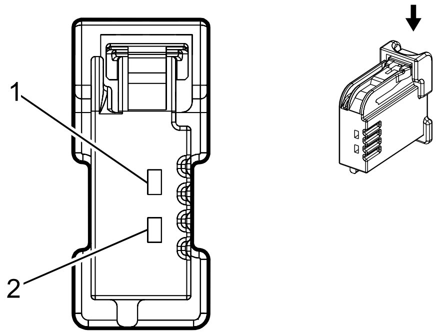
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19J Speaker - Left Instrument Panel (UQ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
2	0.5	D-BU	201	Left Front Speaker Control (+) 1	I	—

P19J Speaker - Left Instrument Panel (UQA/UQH/UQS)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

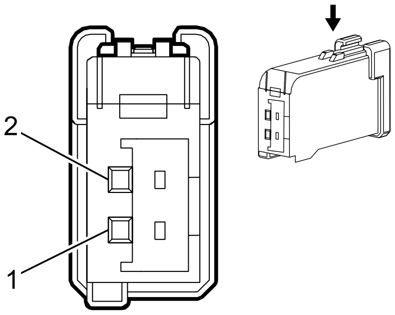
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19J Speaker - Left Instrument Panel (UQA/UQH/UQS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/GY	1956	Left Front Tweeter Speaker (-) Low Reference	I	—
2	0.75	YE/D-BU	1856	Left Front Tweeter Speaker Control (+)	I	—

P19M Speaker - Left Rear Tweeter



Connector Part Information

Harness Type: Left Rear Door Trim

OEM Connector: 13595633

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series (BK)

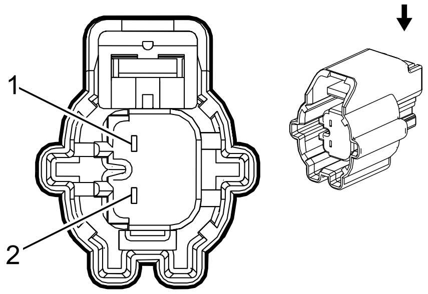
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19M Speaker - Left Rear Tweeter

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN/BK	116	Left Rear Speaker Signal (-)	I	—
2	0.75	GN	199	Left Rear Speaker Control (+)	I	—

P19PD Speaker - Right Front Door Woofer



Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13665501

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series (BK)

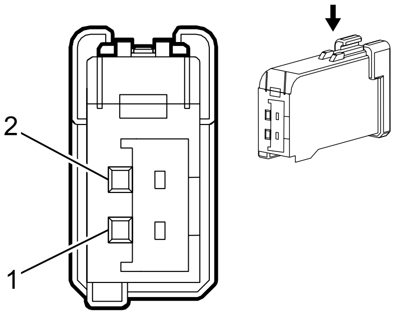
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19PD Speaker - Right Front Door Woofer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
2	1	YE	200	Right Front Speaker Control (+) 1	I	—

P19VD Speaker - Right Front Door Tweeter (UQH)



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13595633

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series (BK)

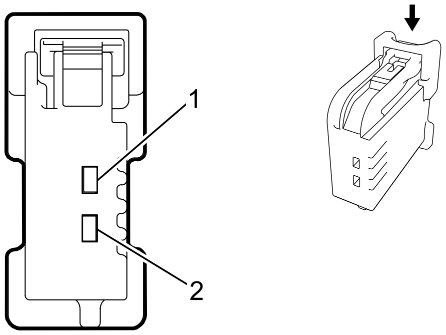
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19VD Speaker - Right Front Door Tweeter (UQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	200	Right Front Speaker Control (+) 1	I	—
2	0.75	YE/BK	117	Right Front Speaker Signal (-) 1	I	—

P19W Speaker - Right Instrument Panel (UQ3)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13595207

Service Connector: 13584097

Description: 2-Way F 1.5 Series (BK)

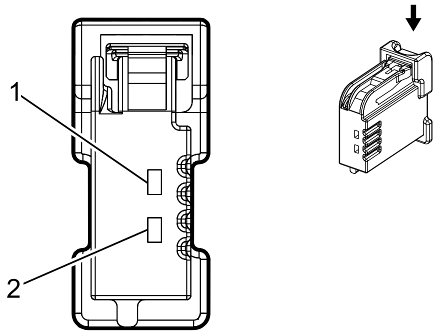
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19W Speaker - Right Instrument Panel (UQ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
2	0.5	YE	200	Right Front Speaker Control (+) 1	I	—

P19W Speaker - Right Instrument Panel (UQA/UQH/UQS)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13608099

Service Connector: 13314097

Description: 2-Way F 1.5 Series (GY)

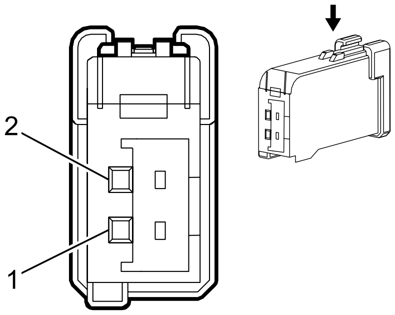
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19W Speaker - Right Instrument Panel (UQA/UQH/UQS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT/BN	1952	Right Front Tweeter Speaker (-) Low Reference	I	—
2	0.75	BN/GN	1852	Right Front Tweeter Speaker Control (+)	I	—

P19Z Speaker - Right Rear Tweeter



Connector Part Information

Harness Type: Right Rear Door Trim

OEM Connector: 13595633

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series (BK)

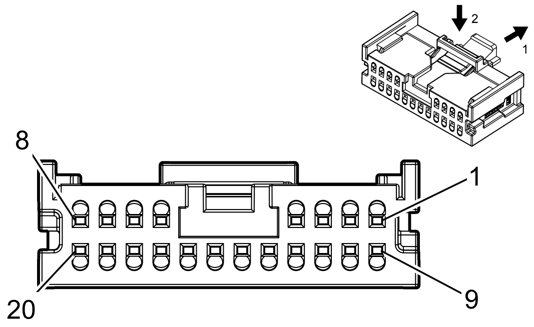
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P19Z Speaker - Right Rear Tweeter

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
2	0.75	WH	46	Right Rear Speaker Control (+)	I	—

P22A Video Display - 2nd Row X2 (ULT)



Connector Part Information

Harness Type: Headliner

OEM Connector: 33167777

Service Connector: 13596105

Description: 20-Way F Mini 50 Series (BK)

Terminal Part Information

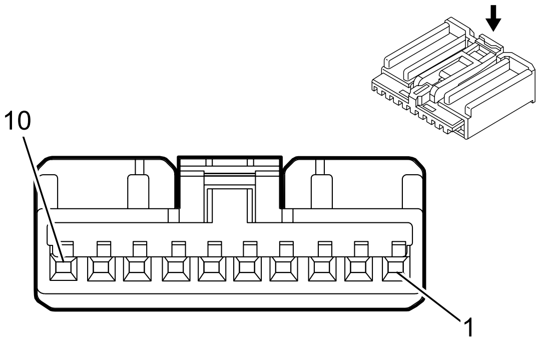
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579954	No Tool Required	J-38125-553	Not Available	Not Available	Not Available	Not Available

P22A Video Display - 2nd Row X2 (ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/GN	7262	Rear Seat Entertainment Channel 3 Audio Signal Right (+)	I	—
2	0.35	WH/VT	7260	Rear Seat Entertainment Channel 3 Audio Signal Left (+)	I	—
3	0.35	WH/BN	7267	Rear Seat Entertainment Channel 4 Audio Signal Right (+)	I	—
4	0.35	WH/D-BU	7265	Rear Seat Entertainment Channel 4 Audio Signal Left (+)	I	—
5	0.35	BK	1050	Ground	I	—
6	0.35	YE	6817	LED Backlight Dimming Control	I	—
7	0.35	WH/BN	6815	Inadvertent Power Control	I	—
8	0.35	RD/GN	1540	Battery Positive Voltage	I	—

9	0.35	BN/WH	7263	Rear Seat Entertainment Channel 3 Audio Signal Right (-)	I	—
10	0.35	BN	7261	Rear Seat Entertainment Channel 3 Audio Signal Left (-)	I	—
11	0.35	BN/D-BU	7268	Rear Seat Entertainment Channel 4 Audio Signal Right (-)	I	—
12	0.35	BN/GY	7266	Rear Seat Entertainment Channel 4 Audio Signal Left (-)	I	—
13	0.35	BK	7264	Rear Seat Entertainment Channel 3 Audio Drain Wire	I	—
14	0.35	BK	7269	Rear Seat Entertainment Channel 4 Audio Drain Wire	I	—
15	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
16	0.35	GY	157	Interior Lamp Control	I	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.35	BK/WH	2550	Ground	I	—
20	0.35	GN/YE	7066	Entertainment Remote Enable Signal	I	—

P22A Video Display - 2nd Row X2 (-ULT)



Connector Part Information

Harness Type: Headliner

OEM Connector: 13574592

Service Connector: 13576634

Description: 10-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

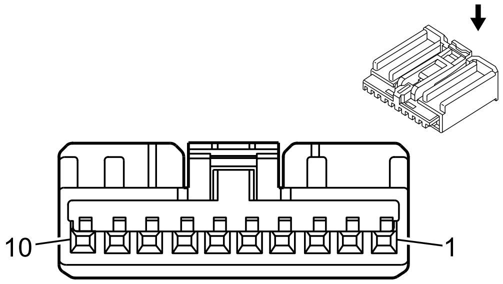
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

P22A Video Display - 2nd Row X2 (-ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
2	0.5	BK	1050	Ground	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	YE	6817	LED Backlight Dimming Control	I	—
5	0.5	WH/BN	6815	Inadvertent Power Control	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	BK/WH	2550	Ground	I	—
9	0.35	GN/YE	7066	Entertainment Remote Enable Signal	I	—

10	0.5	RD/GN	1540	Battery Positive Voltage	I	—

P22B Video Display - 3rd Row



Connector Part Information

Harness Type: Headliner

OEM Connector: 13631701

Service Connector: 15269796

Description: 10-Way F 0.64 Kaizen Series (GY)

Terminal Part Information

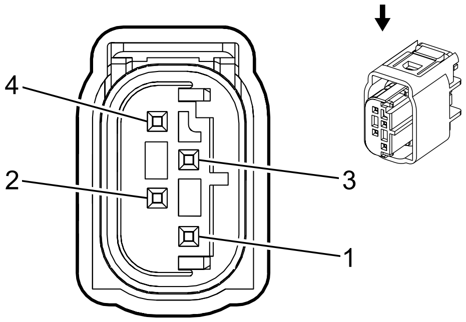
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P

P22B Video Display - 3rd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/GN	7558	LED Ambient Lighting Control 2	I	—
2	0.5	BK	1050	Ground	I	—
3	0.5	GY	157	Interior Lamp Control	I	—
4	0.5	YE	6817	LED Backlight Dimming Control	I	—
5	0.5	WH/BN	6815	Inadvertent Power Control	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	BK/WH	2550	Ground	I	—
9	0.5	GN/YE	7066	Entertainment Remote Enable Signal	I	—

10	0.5	RD/GN	1540	Battery Positive Voltage	I	—

P25 Power Sounder Content Theft Deterrent Alarm Module



Connector Part Information

Harness Type: Body

OEM Connector: 13679454

Service Connector: 13314098

Description: 4-Way F 0.64 Micro-Quadlock Series, Sealed (BK)

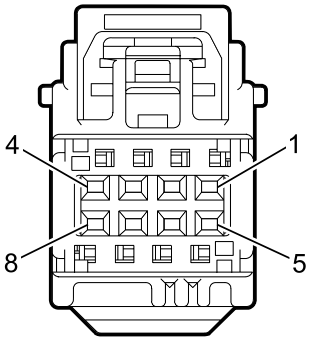
Terminal Part Information

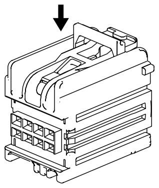
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P25 Power Sounder Content Theft Deterrent Alarm Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	RD/D-BU	4540	Battery Positive Voltage	I	—
3	0.5	GN/D-BU	6133	Local Interconnect Network Serial Data Bus 2	I	—
4	0.5	BK	1150	Ground	I	—

P29 Heads - Up Display X1





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13518475

Service Connector: Service by Harness - See Part Catalog

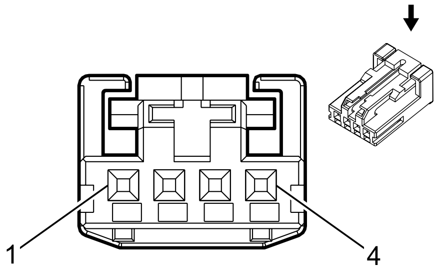
Description: 8-Way F YESC Kaizen Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

P29 Heads - Up Display X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	YE/WH	622	Head Up Display Switch Signal	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	RD/GY	2840	Battery Positive Voltage	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	BK/GN	5699	Head Up Display Switch Low Reference	I	—



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13853727

Service Connector: 19300597

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

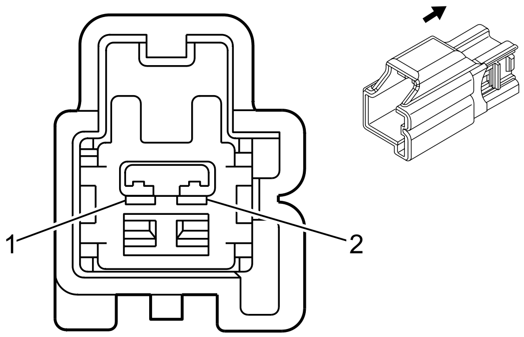
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P43 Collision Alert Indicators

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BK	1639	Run/Crank Ignition 1 Voltage	I	—
2	0.35	GY/YE	3885	Forward Collision Alert LED Control	I	—
3	0.35	WH/GN	3535	Reflected LED Display Dimming Control	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—

P45LR Seat Haptic Movement Motor - Driver Left Rear



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7282-6443-40

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 Series (L-GY)

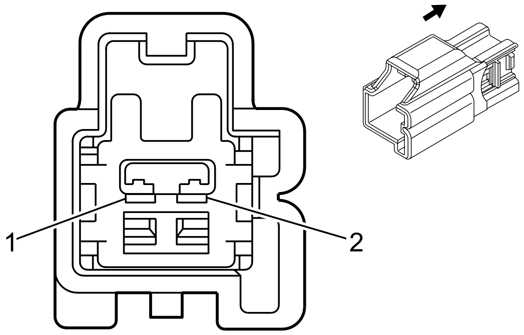
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P45LR Seat Haptic Movement Motor - Driver Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BN	3037	Left Rear Haptic Seat Motor Control	I	—
2	0.5	BK	1150	Ground	I	—

P45RR Seat Haptic Movement Motor - Driver Right Rear



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7282-6443-40

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 Series (L-GY)

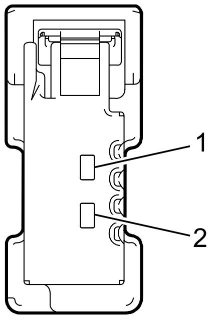
Terminal Part Information

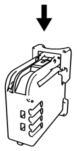
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P45RR Seat Haptic Movement Motor - Driver Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	3038	Right Rear Haptic Seat Motor Control	I	—
2	0.5	BK	1150	Ground	I	—

P27 Mobile Telephone Speaker





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13682170

Service Connector: 13505908

Description: 2-Way F 1.5 Series (GN)

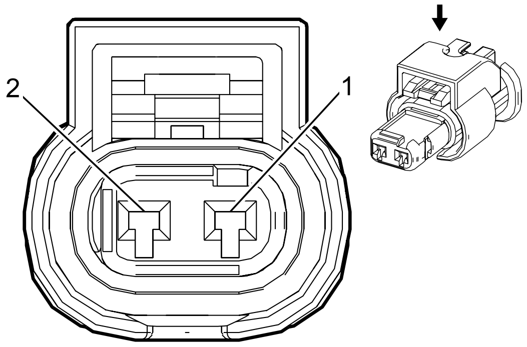
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

P27 Mobile Telephone Speaker

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BK	1160	External Speaker Signal (-)	I	—
2	0.35	VT/WH	1159	External Speaker Signal (+)	I	—

Q2 A/C Compressor Clutch



Connector Part Information

Harness Type: Engine

OEM Connector: 13927761

Service Connector: 19300402

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

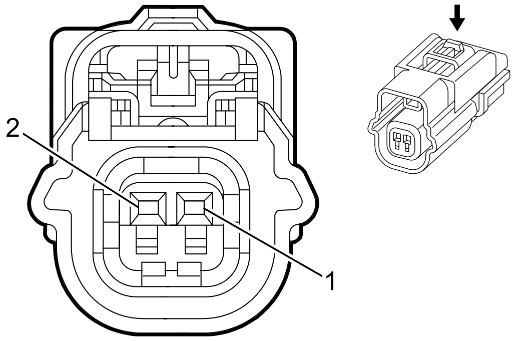
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q2 A/C Compressor Clutch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BK	550	Ground	I	—
2	0.75	BN/GN	59	A/C Compressor Clutch Control	I	—

Q6 Camshaft Position Actuator Solenoid Valve



Connector Part Information

Harness Type: Camshaft Position Sensor Jumper

OEM Connector: 13528494

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 0.64 Kaizen Series, Sealed (BK)

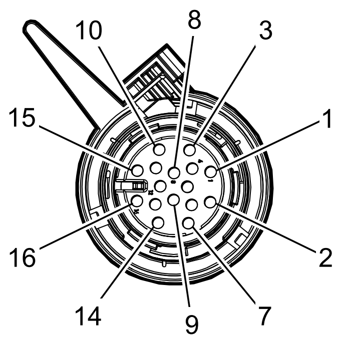
Terminal Part Information

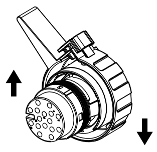
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q6 Camshaft Position Actuator Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/BN	6753	Cam Phaser W Low Reference	I	—
2	0.5	VT/BN	5284	Camshaft Phaser Intake Solenoid 1	I	—

Q8 Control Solenoid Valve Assembly





Connector Part Information

Harness Type: Engine

OEM Connector: 13878751

Service Connector: 19303772

Description: 16-Way F 1.5 Series, Sealed (BK)

Terminal Part Information

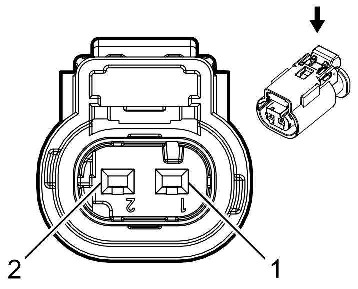
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578934	J-35616-66 (YE)	J-38125-28	2 21 24 47220 0	Yazaki 12	E	1

Q8 Control Solenoid Valve Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	WH/GY	1786	Transmission Park/Neutral Signal 1	I	—
4	0.75	RD/GN	1840	Battery Positive Voltage	I	—
5	0.75	BK/WH	451	Signal Ground	I	—
6 - 8	—	—	—	Not Occupied	—	—
9	0.5	VT/YE	5985	Accessory Wakeup Serial Data	I	—
10	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
11	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
12	0.5	VT/BK	2139	Run/Crank Ignition 1 Voltage	I	—

13	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—
14	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	BN/WH	6354	Output Speed High (Replicated TOS) Input Signal	I	—

Q12 Evaporative Emission Purge Solenoid Valve ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13735326

Service Connector: 13587326

Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

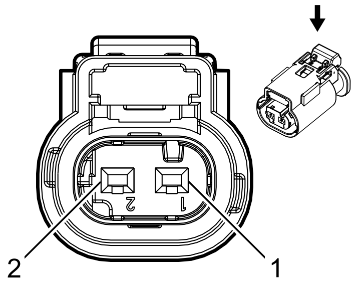
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q12 Evaporative Emission Purge Solenoid Valve ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
2	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—

Q12 Evaporative Emission Purge Solenoid Valve (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13735326

Service Connector: 13587326

Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

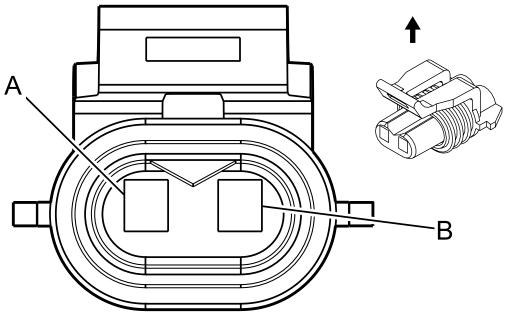
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q12 Evaporative Emission Purge Solenoid Valve (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
2	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—

Q12 Evaporative Emission Purge Solenoid Valve (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 12124037

Service Connector: 13585860

Description: 2-Way F 150 Metri-Pack Series, Sealed (BK)

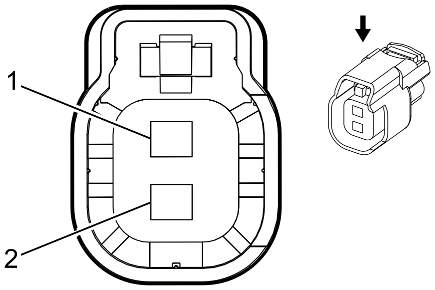
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q12 Evaporative Emission Purge Solenoid Valve (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
B	0.5	GN/D-BU	428	EVAP Canister Purge Solenoid Control	I	—

Q13 Evaporative Emission Vent Solenoid Valve



Connector Part Information

Harness Type: Chassis

OEM Connector: 13771883

Service Connector: 13579002

Description: 2-Way F 1.5 Series, Sealed (BK)

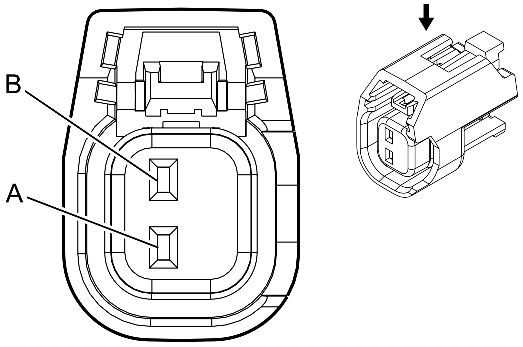
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q13 Evaporative Emission Vent Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	1310	EVAP Canister Vent Solenoid Control	I	—
2	0.5	RD/GN	1840	Battery Positive Voltage	I	—

Q17A Fuel Injector 1



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

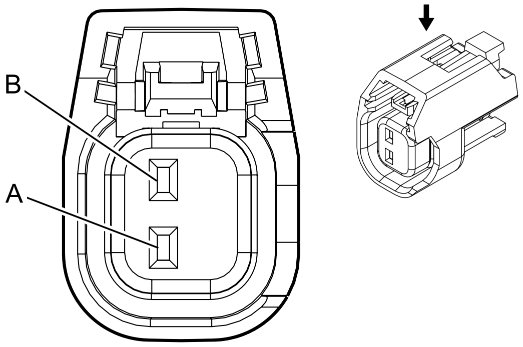
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17A Fuel Injector 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—
B	0.5	GN/YE	1744	Fuel Injector Control 1	I	—

Q17B Fuel Injector 2



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

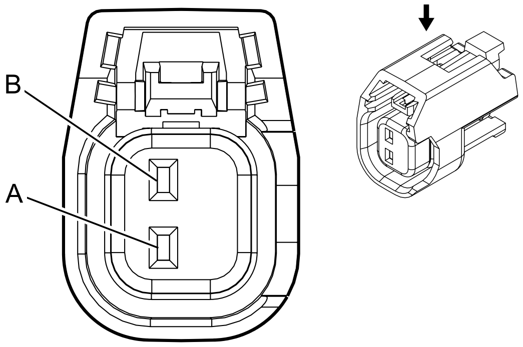
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17B Fuel Injector 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—
B	0.5	YE/WH	1745	Fuel Injector Control 2	I	—

Q17C Fuel Injector 3



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

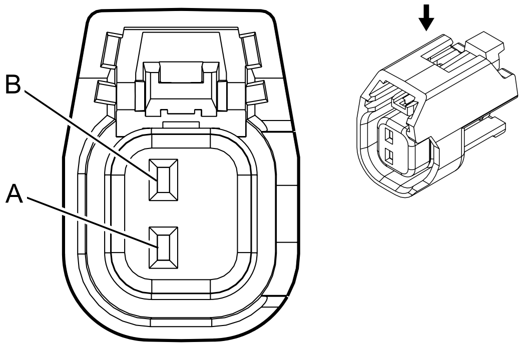
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17C Fuel Injector 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—
B	0.5	BN/VT	1746	Fuel Injector Control 3	I	—

Q17D Fuel Injector 4



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

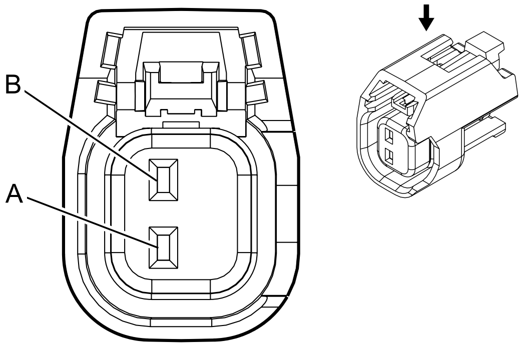
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17D Fuel Injector 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—
B	0.5	BN/YE	844	Fuel Injector Control 4	I	—

Q17E Fuel Injector 5



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

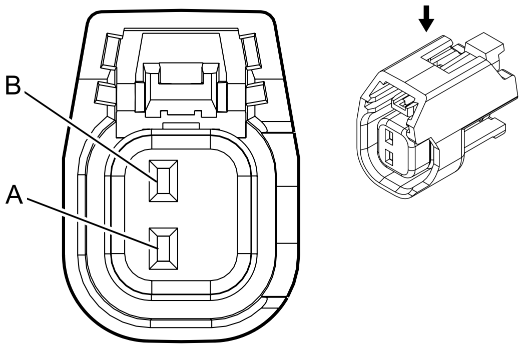
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17E Fuel Injector 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—
B	0.5	BN/GN	845	Fuel Injector Control 5	I	—

Q17F Fuel Injector 6



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

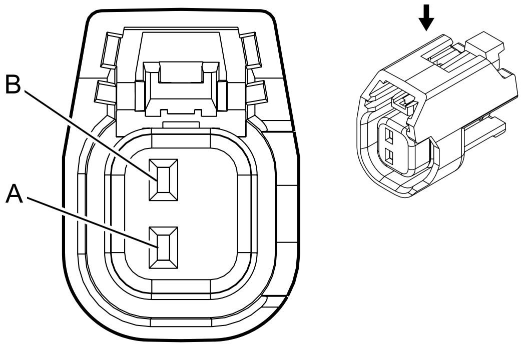
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17F Fuel Injector 6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—
B	0.5	BN/D-BU	846	Fuel Injector Control 6	I	—

Q17G Fuel Injector 7



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

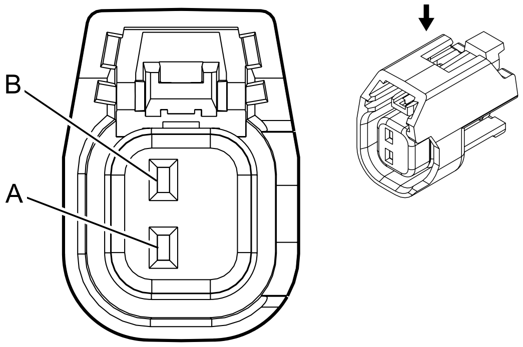
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17G Fuel Injector 7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—
B	0.5	BN/VT	877	Fuel Injector Control 7	I	—

Q17H Fuel Injector 8



Connector Part Information

Harness Type: Engine

OEM Connector: 15419715

Service Connector: 13580876

Description: 2-Way F 150 GT Series, Sealed (GY)

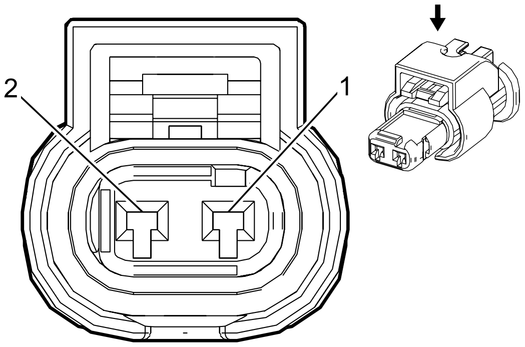
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q17H Fuel Injector 8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—
B	0.5	BN/GY	878	Fuel Injector Control 8	I	—

Q37LF Shock Absorber Actuator - Left Front



Connector Part Information

Harness Type: Chassis

OEM Connector: 13927761

Service Connector: 19300402

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

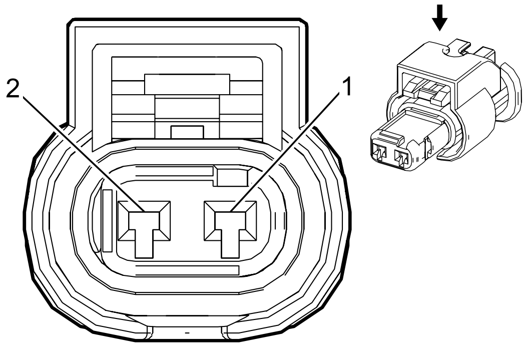
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q37LF Shock Absorber Actuator - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/GY	1448	Left Front Strut Motor Increase Damping Control	I	—
2	0.75	WH/GN	1005	Left Front Strut Motor Decrease Damping Control	I	—

Q37LR Shock Absorber Actuator - Left Rear



Connector Part Information

Harness Type: Chassis

OEM Connector: 13927761

Service Connector: 19300402

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

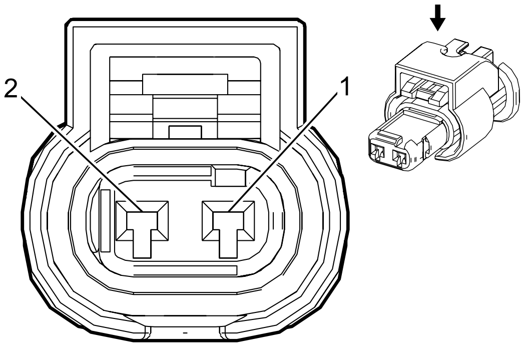
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q37LR Shock Absorber Actuator - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN/VT	1010	Left Rear Strut Motor Increase Damping Control	I	—
2	0.75	WH/BK	1013	Left Rear Strut Motor Decrease Damping Control	I	—

Q37RF Shock Absorber Actuator - Right Front



Connector Part Information

Harness Type: Chassis

OEM Connector: 13927761

Service Connector: 19300402

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

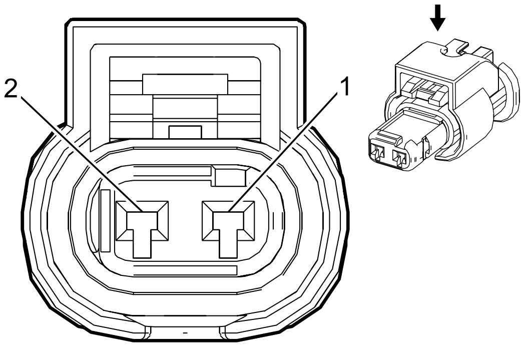
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q37RF Shock Absorber Actuator - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH/BK	1006	Right Front Strut Motor Increase Damping Control	I	—
2	0.75	BN	1009	Right Front Strut Motor Decrease Damping Control	I	—

Q37RR Shock Absorber Actuator - Right Rear



Connector Part Information

Harness Type: Chassis

OEM Connector: 13927761

Service Connector: 19300402

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

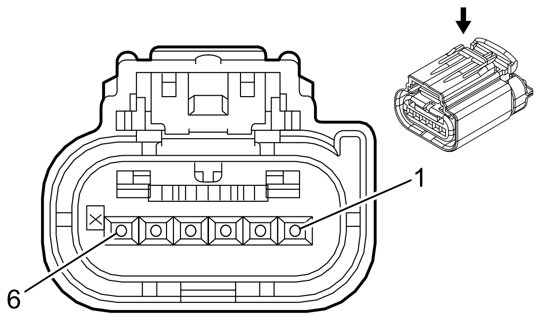
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q37RR Shock Absorber Actuator - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	1014	Right Rear Strut Motor Increase Damping Control	I	—
2	0.75	VT	1017	Right Rear Strut Motor Decrease Damping Control	I	—

Q38 Throttle Body ((L83/L86)+MYC)



Connector Part Information

Harness Type: Engine

OEM Connector: 13699991

Service Connector: 13581267

Description: 6-Way F 0.64 GET Series, Sealed (BK)

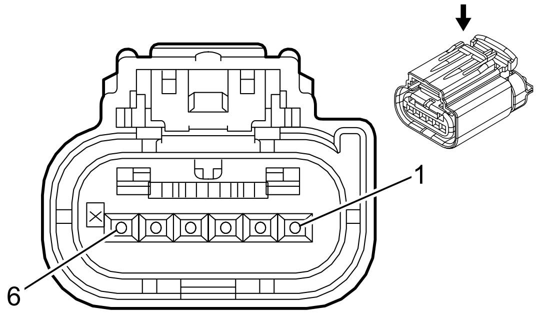
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q38 Throttle Body ((L83/L86)+MYC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Control Open	I	—
2	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
3	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
4	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
5	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
6	—	—	—	Not Occupied	—	—

Q38 Throttle Body (L86+M5U)



Connector Part Information

Harness Type: Engine

OEM Connector: 13699991

Service Connector: 13581267

Description: 6-Way F 0.64 GET Series, Sealed (BK)

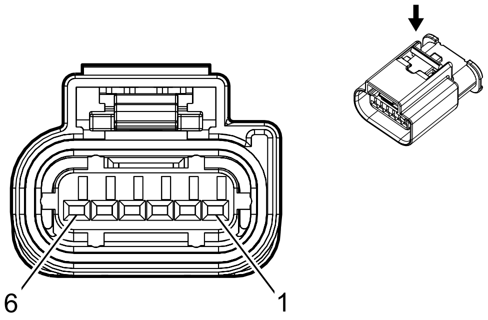
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q38 Throttle Body (L86+M5U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Control Open	I	—
2	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
3	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
4	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
5	0.5	BN/RD	2701	Throttle Position Sensor 5V Reference	I	—
6	—	—	—	Not Occupied	—	—

Q38 Throttle Body (L96)



Connector Part Information

Harness Type: Engine

OEM Connector: 33220833

Service Connector: 19352911

Description: 6-Way F 1.2 MCON Series, Sealed (BK)

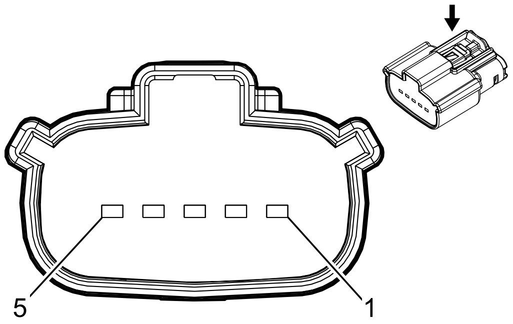
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q38 Throttle Body (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Control Open	I	—
2	0.5	BN/WH	582	Throttle Actuator Control Close	I	—
3	0.5	D-BU/WH	3630	Throttle Position Sensor (SENT1) Signal	I	—
4	0.5	BK/BN	2752	Throttle Position Sensor Low Reference	I	—
5	0.5	BN/YE	2701	Throttle Position Sensor 5V Reference	I	—
6	—	—	—	Not Occupied	—	—

Q43 Valve Lifter Oil Manifold Assembly



Connector Part Information

Harness Type: Engine

OEM Connector: 13845946

Service Connector: 19301719

Description: 5-Way F 150 MX Series, Sealed (BK)

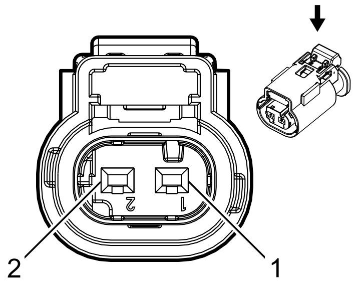
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q43 Valve Lifter Oil Manifold Assembly

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/D-BU	5494	Cylinder Shutoff Solenoid Control 4	I	—
2	0.5	GY	5493	Cylinder Shutoff Solenoid Control 3	I	—
3	0.5	D-BU	5491	Cylinder Shutoff Solenoid Control 1	I	—
4	0.75	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
5	0.5	GN	5492	Cylinder Shutoff Solenoid Control 2	I	—

Q44 Engine Oil Pressure Control Solenoid Valve



Connector Part Information

Harness Type: Camshaft Position Sensor Jumper

OEM Connector: 13735326

Service Connector: Service by Harness - See Part Catalog

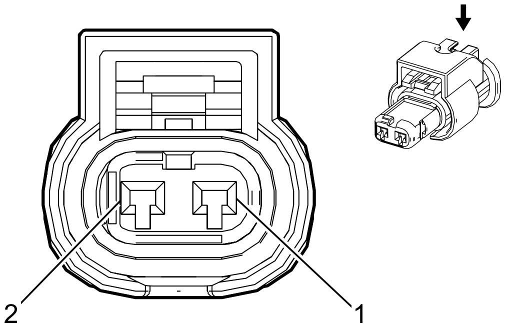
Description: 2-Way F 1.2 Multilock Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q44 Engine Oil Pressure Control Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/D-BU	5293	Powertrain Main Relay Fused Supply 4	I	—
2	0.5	D-BU	179	Oil Pump Command Signal	I	—



Connector Part Information

Harness Type: Engine

OEM Connector: 13927762

Service Connector: 19299928

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

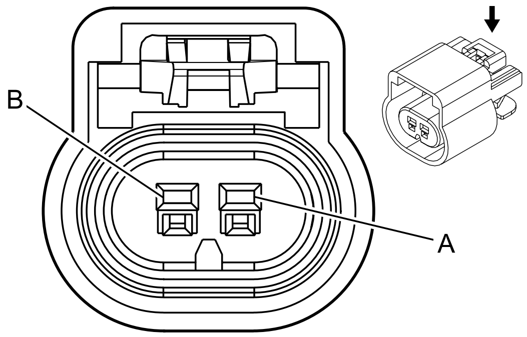
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

Q46 A/C Compressor Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	D-BU/YE	7574	Electric Variable Displacement Control	I	—
2	0.75	D-BU/BN	7573	Electric Variable Displacement Supply	I	—

R6A Terminating Resistor - High Speed Bus



Connector Part Information

Harness Type: Chassis

OEM Connector: 13510085

Service Connector: 13580114

Description: 2-Way F 150 GT Series, Sealed (BK)

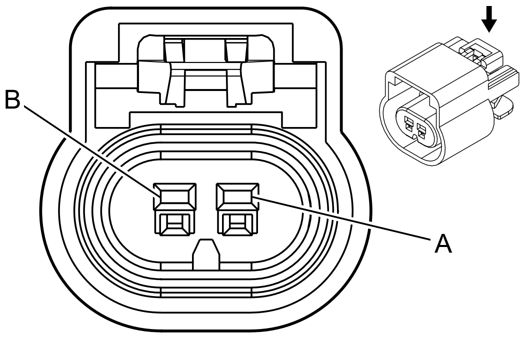
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

R6A Terminating Resistor - High Speed Bus

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	I	—
B	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	I	—

R6E Terminating Resistor - High Speed Extension Bus 1 (UHX/UDV)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13510085

Service Connector: 13580114

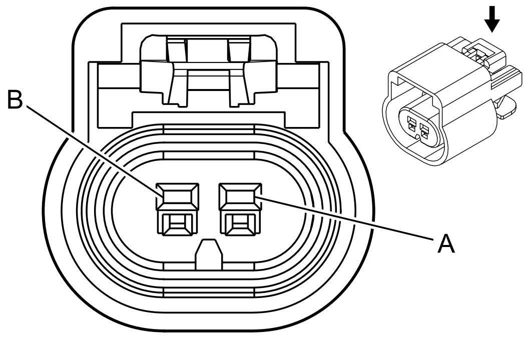
Description: 2-Way F 150 GT Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

R6E Terminating Resistor - High Speed Extension Bus 1 (UHX/UDV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
B	0.5	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—



Connector Part Information

Harness Type: Body

OEM Connector: 13510085

Service Connector: 13580114

Description: 2-Way F 150 GT Series, Sealed (BK)

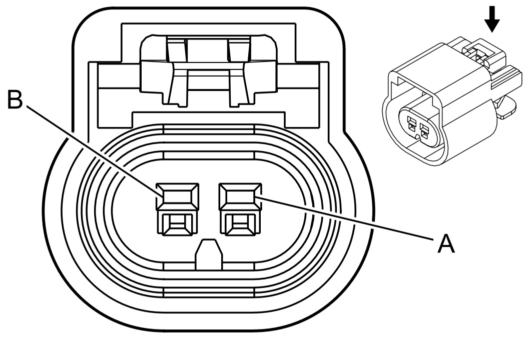
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

R6E Terminating Resistor - High Speed Extension Bus 1 (Z75+UGN)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/GY	3935	High Speed GMLAN Serial Data (+) 8	I	—
B	0.5	WH/GY	3936	High Speed GMLAN Serial Data (-) 8	I	—

R6F Terminating Resistor - High Speed Extension Bus 2



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13510085

Service Connector: 13580114

Description: 2-Way F 150 GT Series, Sealed (BK)

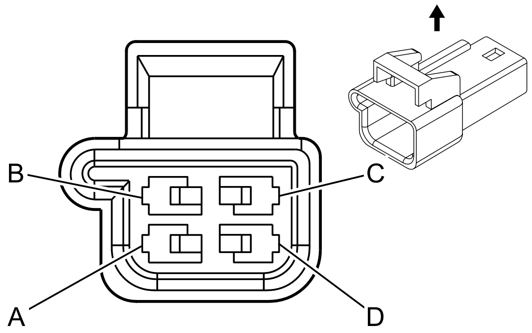
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

R6F Terminating Resistor - High Speed Extension Bus 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	D-BU/GN	1304	High Speed GMLAN Serial Data (+)9	I	—
B	0.5	WH/GN	1305	High Speed GMLAN Serial Data (-)9	I	—

S3 Transmission Shift Lever



Connector Part Information

Harness Type: —

OEM Connector: 12064761

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 150 Metri-Pack Series (BK)

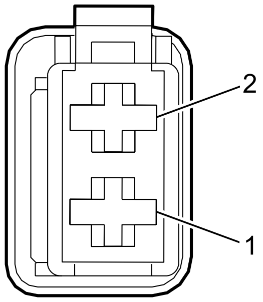
Terminal Part Information

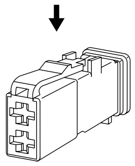
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S3 Transmission Shift Lever

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK/WH	1851	Signal Ground	I	—
2	0.35	BU/GY	553	Shift Select Switch Performance Signal	I	—
3	0.35	VT/YE	5526	Tap Up/Tap Down Switch Signal	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—
A - D	—	—	—	Not Occupied	—	—

S5 Center Console Compartment Lamp Switch





Connector Part Information

Harness Type: Floor Console

OEM Connector: 10787635

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 Timer Series (NA)

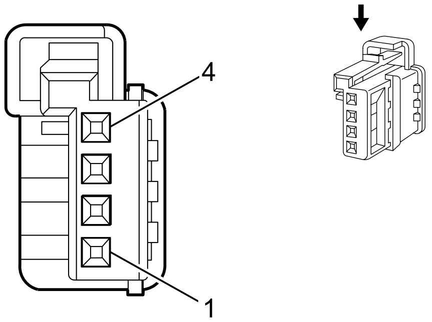
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S5 Center Console Compartment Lamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH/BN	6815	Inadvertent Power Control	I	—
2	0.5	WH/BN	6815	Inadvertent Power Control	I	—

S12 Dome Lamp Switch



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13862319

Service Connector: 13587956

Description: 4-Way F 0.64 Micro-Quadlock Series (BN)

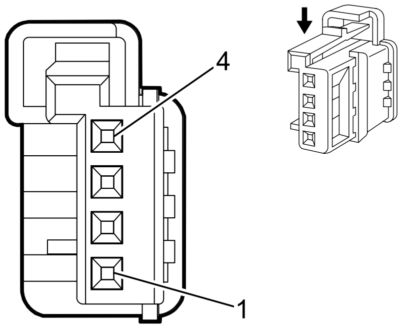
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S12 Dome Lamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2	0.35	GY/GN	328	Interior Lamp Defeat Switch Signal	I	—
3	0.35	GY	156	Courtesy Lamp Switch Signal	I	—
4	0.35	YE	6817	LED Backlight Dimming Control	I	—

S13D Door Lock Switch - Driver



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13597457

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Micro-Quadlock Series (WH)

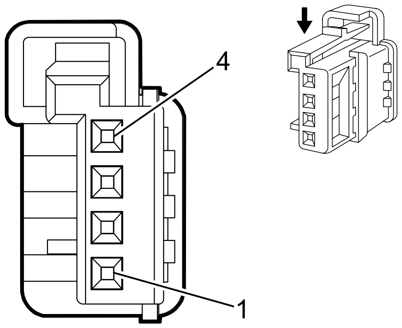
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S13D Door Lock Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.35	BN/YE	780	Driver Door Lock Switch Lock Signal	I	—
3	0.35	BN/WH	781	Driver Door Lock Switch Unlock Signal	I	—
4	0.35	BK	1150	Ground	I	—

S13P Door Lock Switch - Passenger



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13597457

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Micro-Quadlock Series (WH)

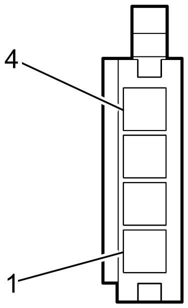
Terminal Part Information

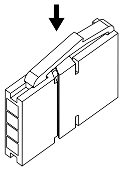
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S13P Door Lock Switch - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	—
2	0.35	YE/VT	244	Passenger Door Lock Switch Lock Control	I	—
3	0.35	BN/VT	245	Passenger Door Lock Switch Unlock Control	I	—
4	0.35	BK	1250	Ground	I	—

S25 Garage Door Opener





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13879342

Service Connector: 19300600

Description: 4-Way F f13601803 (BK)

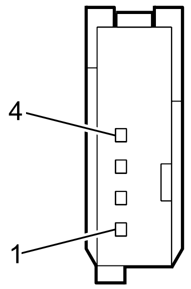
Terminal Part Information

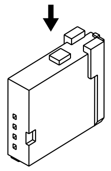
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S25 Garage Door Opener

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/YE	240	Battery Positive Voltage	I	—
2	0.35	YE	6817	LED Backlight Dimming Control	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	BK	1050	Ground	I	—

S27 Head-Up Display Switch





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13820711

Service Connector: 19300398

Description: 4-Way F 0.64 Series (BK)

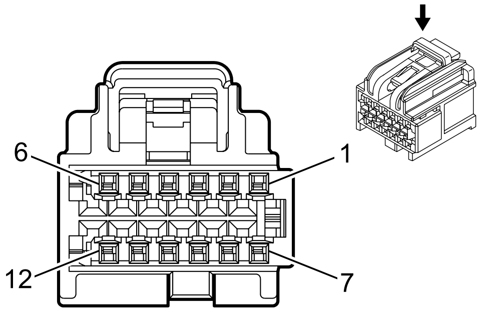
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S27 Head-Up Display Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	6817	LED Backlight Dimming Control	I	—
2	0.35	BK/WH	1851	Signal Ground	I	—
3	0.35	BK/GN	5699	Head Up Display Switch Low Reference	I	—
4	0.35	YE/WH	622	Head Up Display Switch Signal	I	—

S30 Headlamp Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13782625

Service Connector: 19301730

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

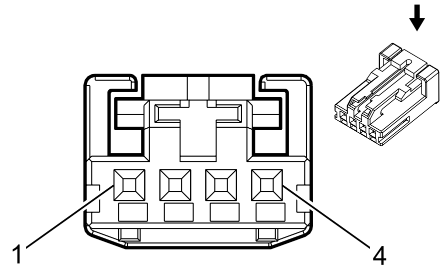
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S30 Headlamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/VT	103	Headlamp Switch On Signal	I	—
2	0.5	YE	6817	LED Backlight Dimming Control	I	—
3	0.35	GN/BN	306	Headlamp Switch Headlamps Off Signal Control	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GN/GY	13	Headlamp Switch Park Lamp Signal	I	—
6	0.35	D-BU/GY	187	Rear Fog Lamp Switch Signal	I	—
7	0.35	BK/YE	5005	Instrument Panel Lamp Dimmer Switch Low Reference	I	—
8	0.75	BK	1850	Ground	I	—
9	—	—	—	Not Occupied	—	—

9	—	—	—	Not Occupied	—	—
10	0.35	D-BU/GY	192	Front Fog Lamp Switch Signal	I	—
11	0.35	YE/GY	44	Instrument Panel Lamp Dimmer Switch Signal	I	—
12	0.35	D-BU/RD	1688	5V Reference	I	—

S31D Seat Heating and Cooling Switch - Driver



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 13853727

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

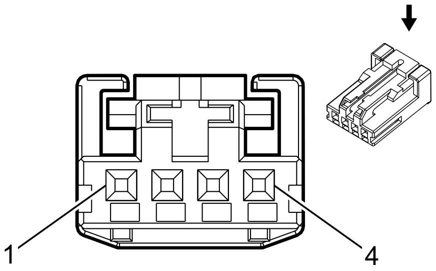
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S31D Seat Heating and Cooling Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD/GY	2840	Battery Positive Voltage	I	—
2	0.35	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	BK	1850	Ground	I	—

S31P Seat Heating and Cooling Switch - Passenger



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 13853727

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

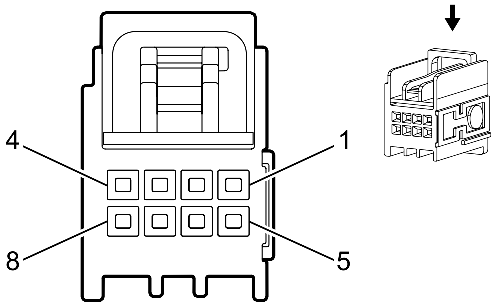
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S31P Seat Heating and Cooling Switch - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1850	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/WH	7527	Local Interconnect Network Serial Data Bus 5	I	—
4	0.35	RD/GY	2840	Battery Positive Voltage	I	—

S38 Ignition Mode Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10890122

Service Connector: 13576543

Description: 8-Way F 0.64 Series (BK)

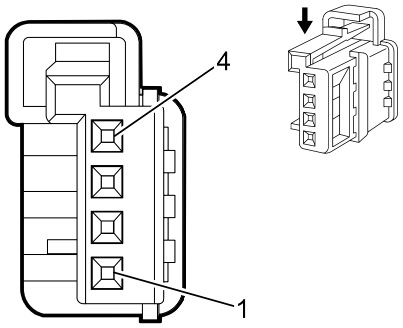
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S38 Ignition Mode Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	BN/BK	5720	Ignition Mode Switch Accessory LED Signal	I	—
3	0.35	GN/BK	3558	Passive Start Switch Signal 2	I	—
4	0.35	BK/WH	1851	Signal Ground	I	—
5	0.35	D-BU/BK	5719	Ignition Mode Switch Start LED Signal	I	—
6	0.35	D-BU/GN	5723	Ignition Mode Switch Mode Voltage	I	—
7	0.35	BK/GY	3559	Passive Start Switch 2 Low Reference	I	—
8	0.35	YE	6817	LED Backlight Dimming Control	I	—

S43 Content Theft Deterrent Sensor Disable Switch



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 10866875

Service Connector: 13316147

Description: 4-Way F 0.64 Micro-Quadlock Series (BU)

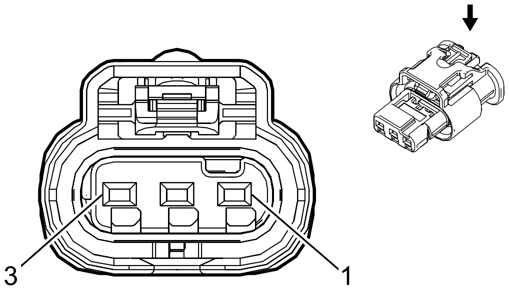
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S43 Content Theft Deterrent Sensor Disable Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/BK	5068	Intrusion Sensor Switch Disable Signal	I	—
2	0.35	BK	1050	Ground	I	—
3	0.35	YE	6817	LED Backlight Dimming Control	I	—
4	0.35	YE/D-BU	3278	Intrusion Sensor Switch LED Control	I	—

S45A Liftgate Control Switch - Exterior



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13868589

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.2 MCP Series, Sealed (BN)

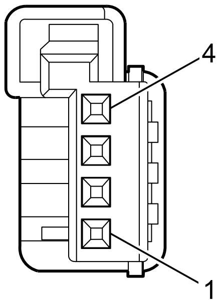
Terminal Part Information

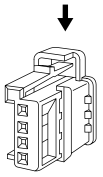
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S45A Liftgate Control Switch - Exterior

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/BN	4118	Local Interconnect Network Serial Data Bus 18	I	—
2	0.5	RD/GN	3140	Battery Positive Voltage	I	—
3	0.5	BK	1450	Ground	I	—

S45B Liftgate Control Switch - Interior





Connector Part Information

Harness Type: Overhead Console

OEM Connector: 10768790

Service Connector: 13584096

Description: 4-Way F 0.64 Micro-Quadlock Series (BK)

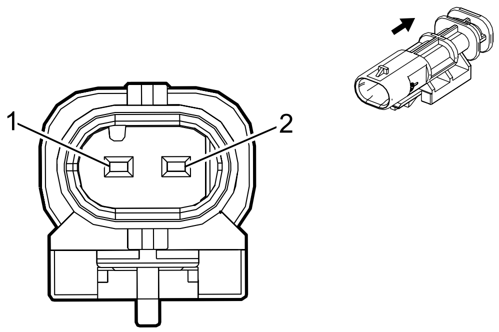
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S45B Liftgate Control Switch - Interior

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.5	YE	6817	LED Backlight Dimming Control	I	—
3	0.35	GN	6112	Power Lift Gate On/Off Switch Signal	I	—
4	0.35	GY/BK	6113	Rear Lift Gate Open/Close Switch Signal	I	—

S46B Liftgate Unlatch Switch



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13788295

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

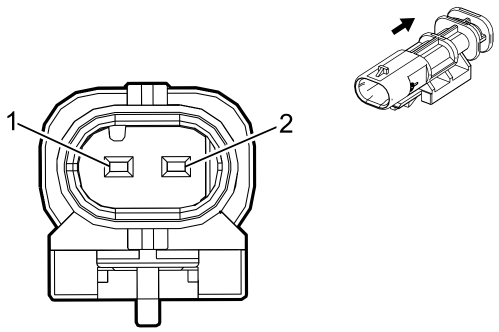
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

S46B Liftgate Unlatch Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE/BU	5797	Rear Closure Handle Switch Open Signal	I	TB4
2	0.35	BK	1450	Ground	I	TB4

S46 Liftgate Handle Switch



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13788295

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.2 Multilock Series, Sealed (BK)

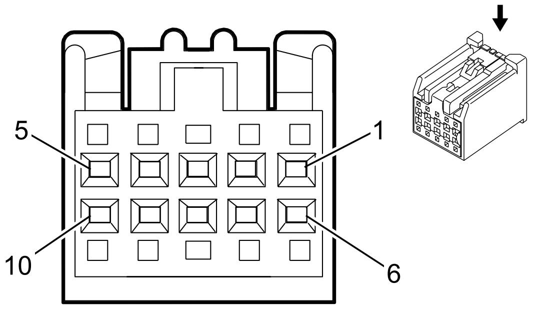
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S46 Liftgate Handle Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/VT	5801	Lift Gate Object Sensor Low Reference	I	TB5
2	0.35	YE/D-BU	5797	Rear Closure Handle Switch Open Signal	I	TB5

S47D Seat Memory Switch - Driver



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13815336

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 Kaizen Series (BK)

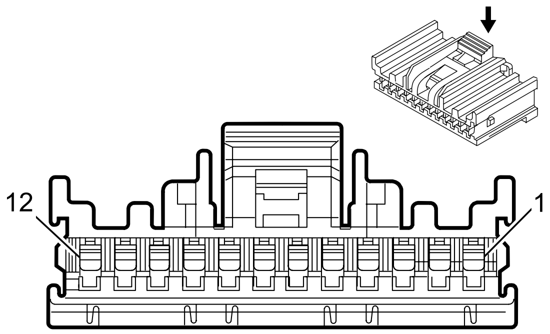
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S47D Seat Memory Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK/D-BU	5978	Memory Switch Low Reference	I	—
2	0.35	YE	6817	LED Backlight Dimming Control	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	D-BU/GN	614	Memory Seat Switch Set Signal	I	—
6	0.35	WH	615	Memory Seat Switch Signal 1	I	—
7 - 10	—	—	—	Not Occupied	—	—

S48A Multifunction Switch - Instrument Panel



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15499371

Service Connector: 19115105

Description: 12-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

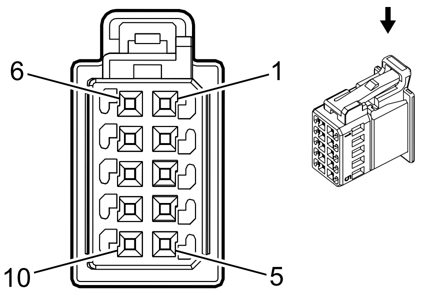
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575867	J-35616-64B (LT BU)	J-38125-215A	SAIT-A03T-M064	Yazaki 14	P	P
II	19300631	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

S48A Multifunction Switch - Instrument Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	II	—
3	0.35	GY/GN	2555	Rear Park Assist Disable Signal	I	—
4	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	I	—
5	0.35	WH	6816	Indicator Dimming Control	I	—
6	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
7	0.35	YE	6817	LED Backlight Dimming Control	I	—
8	0.75	BK	1850	Ground	I	—

9	0.35	D-BU/YE	6844	ABS/TCS Hill Descent Control Switch Signal	I	—
10	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—
11	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	I	—
12	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	I	—

S48C Multifunction Switch 1 - Instrument Panel



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13650061

Service Connector: 19299776

Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

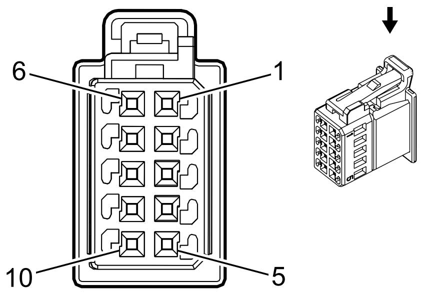
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575784	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S48C Multifunction Switch 1 - Instrument Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	WH	6816	Indicator Dimming Control	I	—
4	0.35	D-BU/VT	1788	Traction Control Switch Signal 1	I	—
5	0.75	BK	1850	Ground	II	—
6	0.35	GN/GY	5286	Adjustable Pedal Switch Forward Signal	I	—
7	0.35	WH/GY	5285	Adjustable Pedal Switch Rearward Signal	I	—
8	0.5	RD/GN	1540	Battery Positive Voltage	I	—
9	—	—	—	Not Occupied	—	—

10	0.35	WH/VT	2092	Fuel Saver Mode (ECO) Switch Signal	I	—

S48D Multifunction Switch 2 - Instrument Panel



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13650061

Service Connector: 19299776

Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

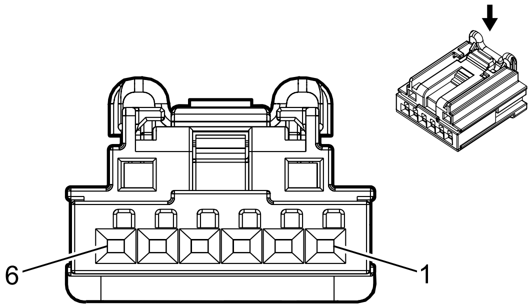
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575782	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	13575784	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S48D Multifunction Switch 2 - Instrument Panel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
3	0.35	WH	6816	Indicator Dimming Control	I	—
4	0.35	D-BU/BN	3161	Parallel Park Assist Disable Switch Signal	I	—
5	0.75	BK	1850	Ground	II	—
6	0.35	GY/WH	3153	Lane Departure Warning Disable Switch Signal	I	—
7	0.35	GN/WH	4047	Glove Box Door Release Signal	I	—
8	0.5	RD/GN	1540	Battery Positive Voltage	I	—

9	0.35	GN/BN	5852	Rear Park Assist LED Disable Signal	I	—
10	0.35	GY/GN	2555	Rear Park Assist Disable Signal	I	—

S51 Telematics Button Assembly (DRZ)



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13978957

Service Connector: 19332709

Description: 6-Way F 0.64 Generation Y Series (BK)

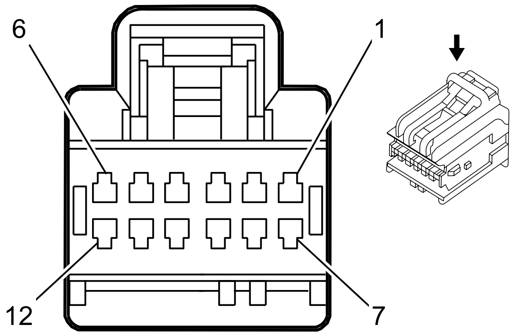
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S51 Telematics Button Assembly (DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/BK	2515	Keypad Control	II	—
2	—	—	—	—	I	—
3	0.35	GN/D-BU	2514	Keypad Signal	II	—
4	0.35	YE/BN	2516	Keypad Green LED Control	II	—
5	0.35	BN/WH	2517	Keypad Red LED Control	II	—
6	0.35	BK	1050	Ground	II	—

S52 Outside Rearview Mirror Switch (A45)



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13889385

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 64 Series, Sealed (BN)

Terminal Part Information

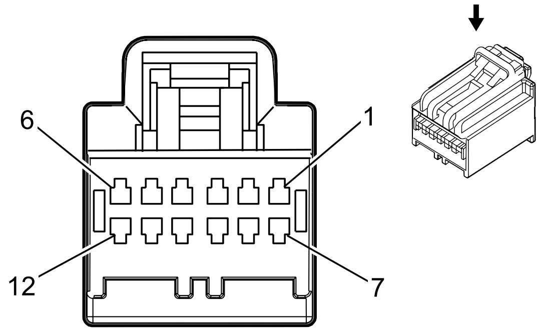
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S52 Outside Rearview Mirror Switch (A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY/BN	3394	Driver Mirror Position Sensor Up (+) Down (-) Signal	I	—
2	0.35	VT/RD	3392	Driver Mirror Position Sensor 5V Reference	I	—
3	0.75	BK	1150	Ground	I	—
4	0.75	VT/D-BU	3390	Driver Mirror Motor Up (+) Down (-) Control	I	—
5	0.75	WH/GN	3412	Driver Mirror Motor Fold In Control	I	—
6	0.75	YE/BN	3391	Driver Mirror Motor Common Control	I	—
7	0.35	WH/YE	3395	Driver Mirror Position Sensor Left (-) Right (+) Signal	I	—
8	0.35	BK/BN	3393	Driver Mirror Position Sensor Low Reference	I	—

9	0.5	GN/WH	7530	Local Interconnect Network Serial Data Bus 8	I	—
10	0.75	RD/VT	1940	Battery Positive Voltage	I	—
11	0.75	BN/BK	3389	Driver Mirror Motor Right (+) Left (-) Control	I	—
12	0.75	GY/WH	3411	Driver Mirror Motor Fold Out Control	I	—

S52 Outside Rearview Mirror Switch (-A45)



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13587624

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 64 Series, Sealed (GY)

Terminal Part Information

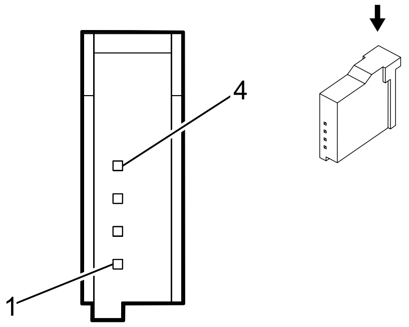
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S52 Outside Rearview Mirror Switch (-A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/VT	3397	Passenger Mirror Motor Up (+) Down (-) Control	I	—
2	0.75	WH/GN	3412	Driver Mirror Motor Fold In Control	I	—
3	0.75	YE/BN	3391	Driver Mirror Motor Common Control	I	—
4	0.75	GN/BK	3396	Passenger Mirror Motor Right (+) Left (-) Control	I	—
5	0.75	BK	1150	Ground	I	—
6	0.35	YE	6817	LED Backlight Dimming Control	I	—
7	0.75	VT/D-BU	3390	Driver Mirror Motor Up (+) Down (-) Control	I	—
8	0.75	WH	3398	Passenger Mirror Motor Common Control	I	—

9	0.75	GY/WH	3411	Driver Mirror Motor Fold Out Control	I	—
10	0.75	BN/BK	3389	Driver Mirror Motor Right (+) Left (-) Control	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	RD/VT	1940	Battery Positive Voltage	I	—

S64D Seat Adjuster Switch - Driver X1 (A45)



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: AIT2PB-04B-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

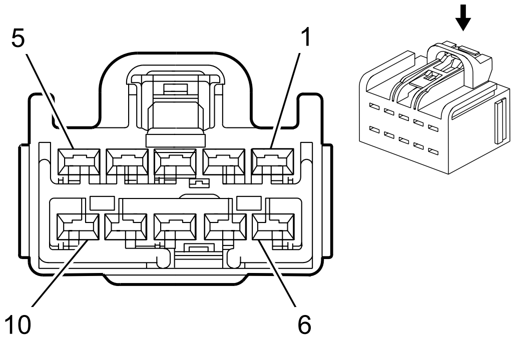
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64D Seat Adjuster Switch - Driver X1 (A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/BN	2240	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
4	0.5	BK	1150	Ground	I	—

S64D Seat Adjuster Switch - Driver X1 (-A45)



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-6457-40

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F YESC Kaizen Series (L-GY)

Terminal Part Information

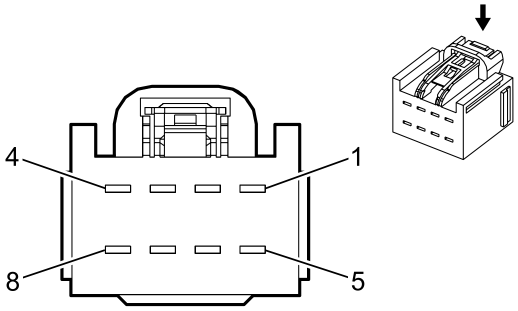
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64D Seat Adjuster Switch - Driver X1 (-A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/BN	286	Driver Power Seat Front Vertical Motor Up Control	I	-A45
	0.5	GN/BN	1518	Power Seat Front Vertical Up Switch Signal	I	A45-Y91/Z75
2	2.5	BK	1150	Ground	I	—
3	1.5	YE/BU	285	Driver Power Seat Horizontal Motor Forward Control	I	-A45
	0.5	YE/BN	1522	Power Seat Horizontal Forward Switch Signal	I	A45-Y91/Z75
4	1.5	GN/YE	276	Driver Power Seat Recline Motor Forward Control	I	-A45
	0.5	GY/BK	1269	Power Seat Recline Forward Switch Signal	I	A45-Y91/Z75
5	1.5	BU/VT	287	Driver Power Seat Front Vertical Motor Down Control	I	-A45
	0.5	BU/VT	1520	Power Seat Front Vertical Down Switch Signal	I	A45-Y91/Z75

6	2.5	RD/YE	5040	Battery Positive Voltage	I	-A45
	0.35	BK	1150	Ground	I	A45-Y91/Z75
7	1.5	GY/GN	284	Driver Power Seat Horizontal Motor Rearward Control	I	-A45
	0.5	GY/GN	1523	Power Seat Horizontal Rearward Switch Signal	I	A45-Y91/Z75
8	1.5	YE	282	Driver Power Seat Rear Vertical Motor Up Control	I	-A45
	0.5	YE	1519	Power Seat Rear Vertical Up Switch Signal	I	A45-Y91/Z75
9	1.5	BU/YE	277	Driver Power Seat Recline Motor Rearward Control	I	-A45
	0.5	GN/GY	1270	Power Seat Recline Rearward Switch Signal	I	A45-Y91/Z75
10	1.5	GY/BU	283	Driver Power Seat Rear Vertical Motor Down Control	I	-A45
	0.5	YE/BU	1521	Power Seat Rear Vertical Down Switch Signal	I	A45-Y91/Z75

S64D Seat Adjuster Switch - Driver X2



Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7283-3243-40

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 2.8 Series (L-GY)

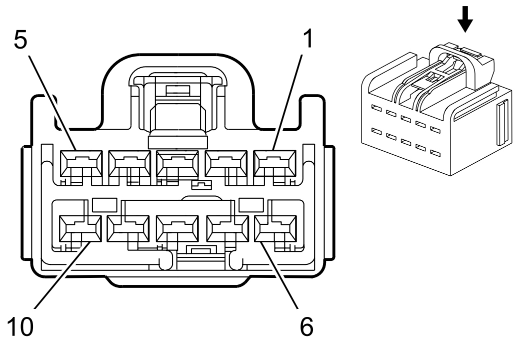
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64D Seat Adjuster Switch - Driver X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	1066	Driver Seat Lumbar Up Switch Signal	I	—
2	1.5 0.5	BU YE	611 1065	Driver Power Seat Lumbar Motor Forward Control Driver Seat Lumbar Forward Switch Signal	I I	-A45 A45-Y91/Z75
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	YE/BK	1067	Driver Seat Lumbar Down Switch Signal	I	—
6	1.5 0.5	VT BU/VT	610 1064	Driver Power Seat Lumbar Motor Rearward Control Driver Seat Lumbar Rearward Switch Signal	I I	-A45 A45-Y91/Z75
7 - 8	—	—	—	Not Occupied	—	—

S64P Seat Adjuster Switch - Passenger X1 ((AG2+AG6)-ULT)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-6457-40

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F YESC Kaizen Series (L-GY)

Terminal Part Information

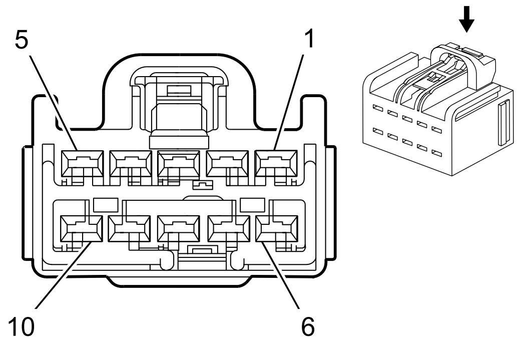
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X1 ((AG2+AG6)-ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN/BU	298	Passenger Power Seat Front Vertical Motor Down Control	I	—
2	1.5	GN	76	Passenger Power Seat Recline Motor Forward Control	I	—
3	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	—
4	1.5	GN/VT	297	Passenger Power Seat Front Vertical Motor Up Control	I	—
5	2.5	BK	1250	Ground	I	—
6	1.5	BU/WH	289	Passenger Power Seat Rear Vertical Motor Down Control	I	—
7	1.5	BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	—
8	1.5	GN/WH	288	Passenger Power Seat Rear Vertical Motor Up Control	I	—

9	1.5	YE/BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	—
10	2.5	RD/BN	1440	Battery Positive Voltage	I	—

S64P Seat Adjuster Switch - Passenger X1 ((AG2-AG6)-ULT)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-6457-40

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F YESC Kaizen Series (L-GY)

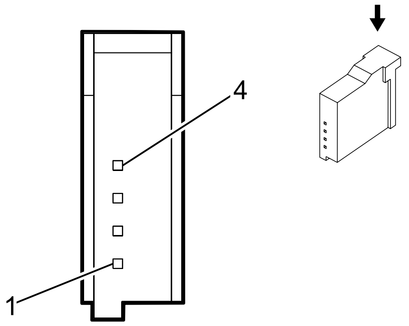
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X1 ((AG2-AG6)-ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	1.5	GN	76	Passenger Power Seat Recline Motor Forward Control	I	—
3	1.5	YE/WH	296	Passenger Power Seat Horizontal Motor Forward Control	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1250	Ground	I	—
6	—	—	—	Not Occupied	—	—
7	1.5	BU/BN	77	Passenger Power Seat Recline Motor Rearward Control	I	—
8	—	—	—	Not Occupied	—	—
9	1.5	YE/BU	290	Passenger Power Seat Horizontal Motor Rearward Control	I	—
10	2.5	RD/BN	1440	Battery Positive Voltage	I	—

S64P Seat Adjuster Switch - Passenger X1 (AG2+ULT)



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: AIT2PB-04B-1AK

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 0.64 Series (BK)

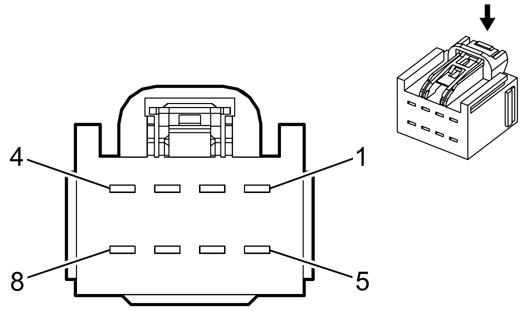
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X1 (AG2+ULT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/WH	2240	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN/GY	3758	Local Interconnect Network Serial Data Bus 13	I	—
4	0.5	BK	1250	Ground	I	—

S64P Seat Adjuster Switch - Passenger X2



Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7283-3243-40

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 2.8 Series (L-GY)

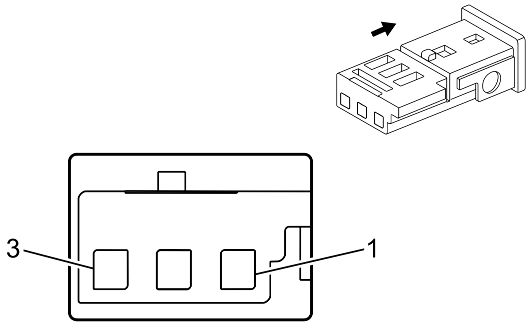
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S64P Seat Adjuster Switch - Passenger X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	1.5	VT	210	Passenger Power Seat Lumbar Motor Rearward Control	I	—
4	1.5	BN/YE	793	Passenger Power Seat Lumbar Motor Up Control	I	—
5	—	—	—	Not Occupied	—	—
6	1.5	BU	211	Passenger Power Seat Lumbar Motor Forward Control	I	—
7	—	—	—	Not Occupied	—	—
8	1.5	BU/YE	792	Passenger Power Seat Lumbar Motor Down Control	I	—

S70E Steering Wheel Controls Switch - Radio Presets



Connector Part Information

Harness Type: —

OEM Connector: 13153088

Service Connector: Service by Harness - See Part Catalog

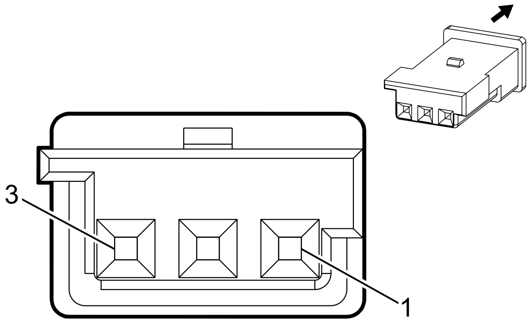
Description: 3-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S70E Steering Wheel Controls Switch - Radio Presets

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/YE	4313	Radio Favorite Forward Signal	I	—
2	0.35	YE/BU	4312	Radio Favorite Back Signal	I	—
3	0.35	BK	1050	Ground	I	—



Connector Part Information

Harness Type: —

OEM Connector: 19153569

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F Micro-Quadlock Series (PU)

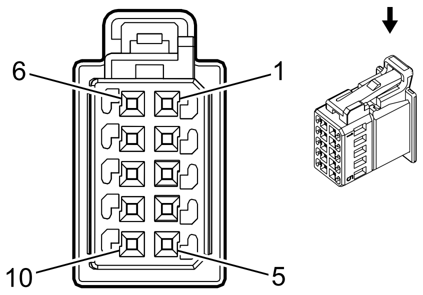
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S70F Steering Wheel Controls Switch - Radio Volume

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU	4315	Radio Volume Up Signal	I	—
2	0.35	YE/BU	4314	Radio Volume Down Signal	I	—
3	0.35	BK	1050	Ground	I	—

S70L Steering Wheel Controls Switch - Left (X88)



Connector Part Information

Harness Type: —

OEM Connector: 13582766

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

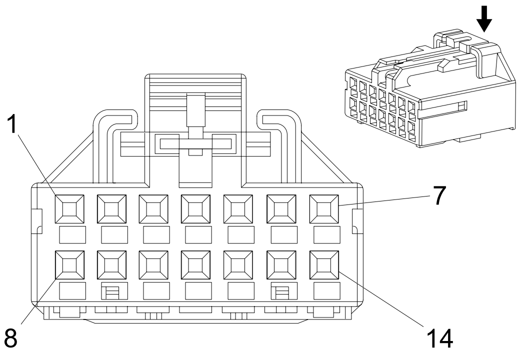
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S70L Steering Wheel Controls Switch - Left (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.5	VT	1050	Ground	I	—
3	0.35	GY/OG	5737	Adaptive Cruise Control Gap Up/Down Switch Signal	I	—
4	0.35	BN/YE	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
5	0.35	OG	5883	Heated Steering Wheel Switch Signal	I	—
6	0.35 0.35	YE YE	6817 6136	LED Backlight Dimming Control Control	I I	UK3 -UK3
6	0.35	YE	6817	LED Backlight Dimming Control	I	UK3

	0.35	YE	6136	Control	I	-UK3
7	0.35	WH	6816	Indicator Dimming Control	I	—
8	0.35	PK	5884	Heated Steering Wheel Switch LED Control	I	—
9	0.35	WH	1444	12V Reference	I	—
10	0.35	RD/YE	3040	Battery Positive Voltage	I	—

S70L Steering Wheel Controls Switch - Left (Z88)



Connector Part Information

Harness Type: —

OEM Connector: 13586834

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F Micro-Quadlock Series (BK)

Terminal Part Information

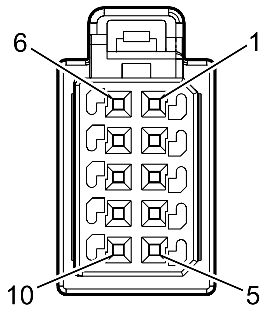
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

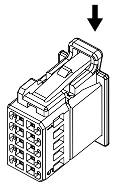
S70L Steering Wheel Controls Switch - Left (Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.5	VT	1050	Ground	I	—
3	0.35	GY/OG	5737	Adaptive Cruise Control Gap Up/Down Switch Signal	I	—
4	0.35	BN/YE	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
5	0.35	OG	5883	Heated Steering Wheel Switch Signal	I	—
6	0.35 0.35	YE YE	6817 6136	LED Backlight Dimming Control Control	I I	UK3 -UK3
6	0.35 0.35	YE YE	6817 6136	LED Backlight Dimming Control Control	I I	UK3 -UK3

7	0.35	PK	5884	Heated Steering Wheel Switch LED Control	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.35	RD/YE	3040	Battery Positive Voltage	I	—
11	0.35	WH	6816	Indicator Dimming Control	I	—
12	0.35	GY	9500	Cellular Telephone Voice Signal	I	—
13	0.35	BK/YE	9501	Cellular Telephone Voice Low Reference	I	—
14	0.35	WH	1444	12V Reference	I	—

S70R Steering Wheel Controls Switch - Right (X88)





Connector Part Information

Harness Type: —

OEM Connector: 13582767

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

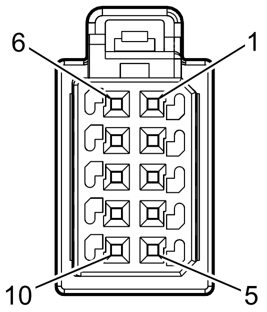
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

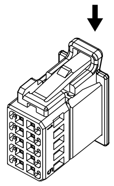
S70R Steering Wheel Controls Switch - Right (X88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	UK3
2	0.35	WH	6816	Indicator Dimming Control	I	—
3	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	RD/YE	3040	Battery Positive Voltage	I	—
6	0.35	BK	1050	Ground	I	—
7	0.35	BU	4315	Radio Volume Up Signal	I	—
8	0.35	GN/BN	4314	Radio Volume Down Signal	I	—

9	0.35	WH/YE	4313	Radio Favorite Forward Signal	I	—
10	0.35	YE/BU	4312	Radio Favorite Back Signal	I	—

S70R Steering Wheel Controls Switch - Right (Z88)





Connector Part Information

Harness Type: —

OEM Connector: 13582767

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F 0.64 Micro-Quadlock Series (BK)

Terminal Part Information

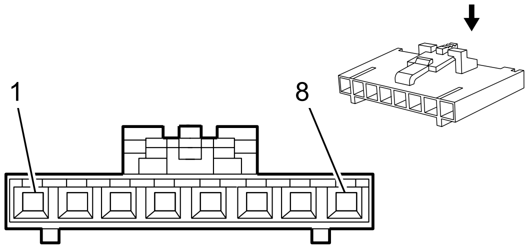
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S70R Steering Wheel Controls Switch - Right (Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control	I	UK3
2	0.35	WH	6816	Indicator Dimming Control	I	—
3	0.5	GN/BK	3894	Local Interconnect Network Serial Data Bus 12	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	RD/YE	3040	Battery Positive Voltage	I	—
6	0.35	BK	1050	Ground	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	BK/YE	9501	Cellular Telephone Voice Signal	I	—
9	0.35	GY	9500	Cellular Telephone Voice Low Reference	I	—

10	—	—	—	Not Occupied	—	—

S72 Sunroof Switch



Connector Part Information

Harness Type: Overhead Console

OEM Connector: 12103492

Service Connector: 89046705

Description: 8-Way F 0.64 SL Series (BK)

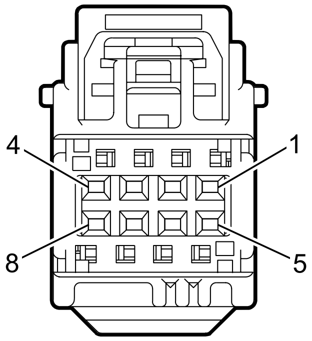
Terminal Part Information

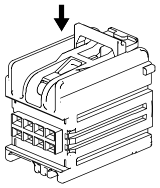
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S72 Sunroof Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/D-BU	2074	Sunroof Switch Express Signal	I	—
2	0.35	YE/VT	144	Sunroof Switch Open Vent Signal	I	—
3	0.35	YE	6817	LED Backlight Dimming Control	I	—
4	0.35	D-BU/WH	110	Sunroof Switch Close Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	GN/WH	100	Sunroof Switch Open Signal	I	—
7	0.35	BK	1050	Ground	I	—
8	0.35	GY/VT	2075	Sunroof Switch Close Vent Signal	I	—

S76 Trailer Brake Control Switch





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13518475

Service Connector: 13576542

Description: 8-Way F YESC Kaizen Series (BK)

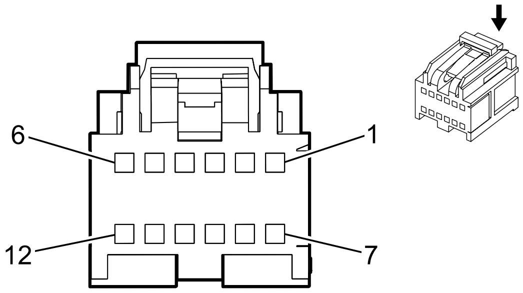
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S76 Trailer Brake Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	D-BU/RD	7632	Integrated Trailer Brake Controller Switch 5V Reference	I	—
4	0.5	YE	7635	Integrated Trailer Brake Controller Manual Apply Signal	I	—
5	0.5	BN	7634	Integrated Trailer Brake Controller Redundant Manual Apply Signal	I	—
6	0.5	GN/BK	7633	Integrated Trailer Brake Controller User Gain Signal	I	—
7	0.35	YE	6817	LED Backlight Dimming Control	I	—
8	0.5	BK/BN	7631	Integrated Trailer Brake Controller Switch Low Reference	I	—

S77 Transfer Case Shift Control Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33104389

Service Connector: 13594072

Description: 12-Way F 0.64 OCS Series (GY)

Terminal Part Information

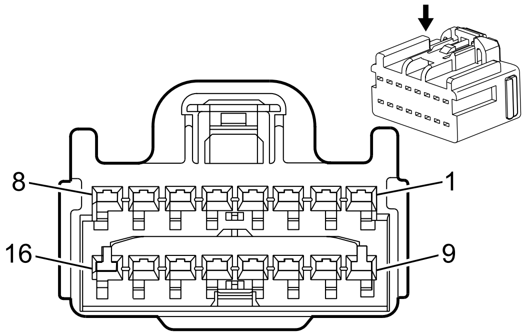
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300660	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

S77 Transfer Case Shift Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
3	0.35	BN	1560	Neutral Indicator Control	I	—
4	0.35	WH	6816	Indicator Dimming Control	I	—
5	0.35	YE	6817	LED Backlight Dimming Control	I	—
6	0.75	BK	1050	Ground	I	—
7	0.35	GY/GN	1561	AWD Indicator Control	I	—
8	0.35	GN/BK	1563	2 HI Indicator Control	I	—

9	0.35	BN/BK	1566	4 HI Indicator Control	I	—
10	0.35	VT/WH	1565	4 LO Indicator Control	I	—
11	0.35	GY/RD	6029	Four Wheel Drive Mode Switch 5V Reference	I	—
12	0.35	D-BU/YE	1693	Four Wheel Drive Switch Signal	I	—

S78 Turn Signal/Multifunction Switch X1



Connector Part Information

Harness Type: —

OEM Connector: 89047090

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 1.5 Kaizen Series (GN)

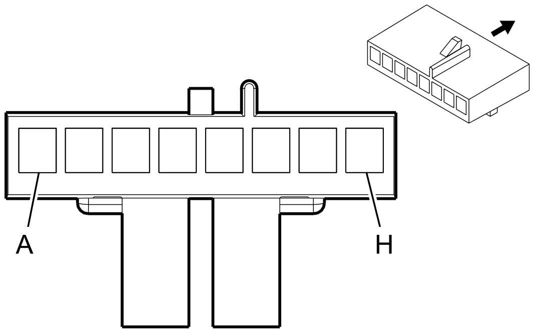
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S78 Turn Signal/Multifunction Switch X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	GY	1715	Windshield Wiper Switch High Signal	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	WH/BK	94	Windshield Washer Switch Signal	I	—
7	0.35	BK/GY	6009	Windshield Wiper Switch Low Reference	I	—
8	0.35	YE/BU	1714	Windshield Wiper Switch Low Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	YE/BN	307	Headlamp Switch Flash To Pass Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.35	BK/WH	1851	Signal Ground	I	—

14	0.35	WH	524	Headlamp Dimmer Switch High Beam Signal	I	—
15 - 16	—	—	—	Not Occupied	—	—



Connector Part Information

Harness Type: —

OEM Connector: 12064862

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 150 Metri-Pack Series (BK)

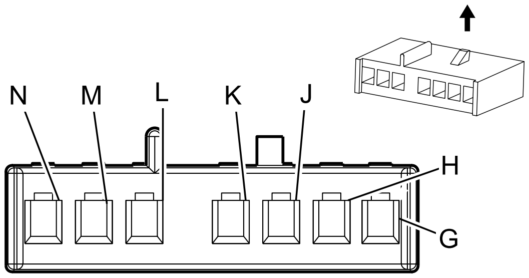
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S78 Turn Signal/Multifunction Switch X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A - B	—	—	—	Not Occupied	—	—
C	0.35	BK/WH	1851	Signal Ground	I	—
D	0.35	VT/BU	664	Hazard Switch Right Turn Signal	I	—
E	0.35	WH/GN	663	Hazard Switch Left Turn Signal	I	—
F	0.35	BK/WH	1851	Signal Ground	I	—
G	0.35	GN/WH	111	Hazard Switch Signal	I	—
H	—	—	—	Not Occupied	—	—

S78 Turn Signal/Multifunction Switch X3



Connector Part Information

Harness Type: —

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way F 150 Metri-Pack Series (GY)

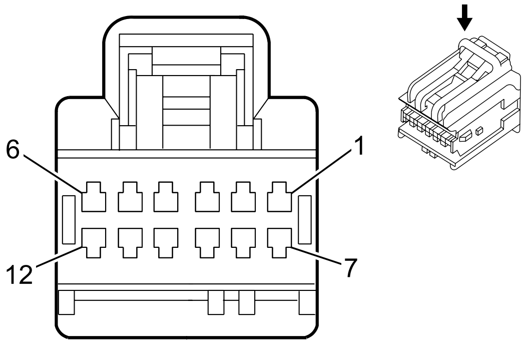
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required

S78 Turn Signal/Multifunction Switch X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/BU	391	Rear Window Wiper Switch Signal	I	—
2	0.35	BK/WH	1851	Signal Ground	I	—
4	0.35	GY/YE	7595	Auto Wiper On Signal	I	—
G - N	—	—	—	Not Occupied	—	—

S79D Window Switch - Driver



Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 13551678

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 0.64 Series (BK)

Terminal Part Information

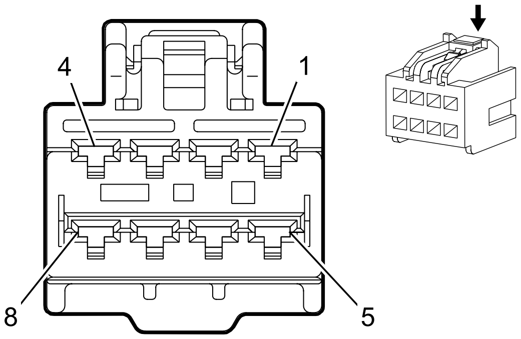
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79D Window Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	1150	Ground	I	—
2	0.35	GN/VT	7628	Power Window Motor Left Front Express Control	I	—
3	0.35	GY/BK	1136	Power Window Master Switch Left Front Down Signal	I	—
4	0.5	RD/VT	1940	Battery Positive Voltage	I	—
5	0.5	GN/YE	6134	Local Interconnect Network Serial Data Bus 3	I	—
6	0.35	GN/WH	1300	Power Window Master Switch Left Front Up Signal	I	—
7	0.35	WH/VT	3270	Driver Door Lock Motor Status Signal	I	—
8	0.35	D-BU/VT	1124	Door Lock Key Switch Unlock Signal	I	—

9	—	—	—	Not Occupied	—	—
10	0.35	YE/BN	3265	Child Security Lock Switch Signal	I	—
11	0.35	WH	6816	Indicator Dimming Control	I	—
12	0.35	GY	5697	Child Lockout Indicator Control	I	—

S79LR Window Switch - Left Rear



Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 15491286

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 2.8 Series (BK)

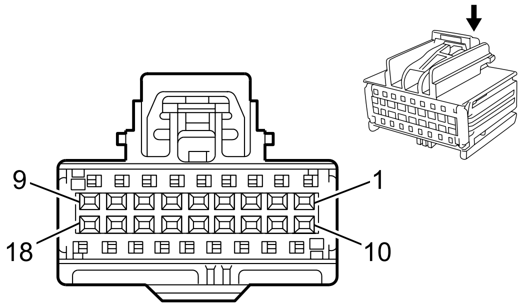
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79LR Window Switch - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
2	0.35	GY/WH	747	Left Rear Door Ajar Switch Signal	I	—
3	0.5	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1150	Ground	I	—
6	2.5	D-BU/VT	668	Power Window Motor Left Rear Up Control	I	—
7	2.5	YE/D-BU	669	Power Window Motor Left Rear Down Control	I	—
8	2.5	RD/D-BU	1842	Battery Positive Voltage	I	—

S79P Window Switch - Passenger (A45)



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13548562

Service Connector: Service by Harness - See Part Catalog

Description: 18-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

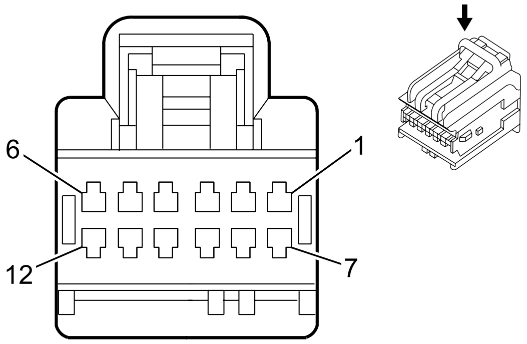
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79P Window Switch - Passenger (A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/WH	3413	Passenger Mirror Motor Fold Out Control	I	—
2	0.75	YE/VT	3397	Passenger Mirror Motor Up (+) Down (-) Control	I	—
3	0.75	WH	3398	Passenger Mirror Motor Common Control	I	—
4	0.35	YE/RD	3399	Passenger Mirror Position Sensor 5V Reference	I	—
5	0.35	D-BU/YE	3401	Passenger Mirror Position Sensor Up (+) Down (-) Signal	I	—
6	0.35	BK/GN	3400	Passenger Mirror Position Sensor Low Reference	I	—
7	0.75	D-BU/GY	3414	Passenger Mirror Motor Fold In Control	I	—
8	0.75	GN/BK	3396	Passenger Mirror Motor Right (+) Left (-) Control	I	—

9	0.5	GN/WH	7530	Local Interconnect Network Serial Data Bus 8	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	VT/WH	3403	Passenger Mirror Position Sensor Left (-) Right (+) Signal	I	—
12	—	—	—	Not Occupied	—	—
13	0.35	BK	1250	Ground	I	—
14	0.35	VT/GY	2765	Power Window Switch Right Front Express Signal	I	—
15	0.35	BN/YE	167	Power Window Master Switch Right Front Down Signal	I	—
16	0.5	RD/D-BU	840	Battery Positive Voltage	I	—
17	0.35	YE	6817	LED Backlight Dimming Control	I	—
18	0.35	YE/BK	166	Power Window Master Switch Right Front Up Signal	I	—

S79P Window Switch - Passenger (-A45)



Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 13551678

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 0.64 Series (BK)

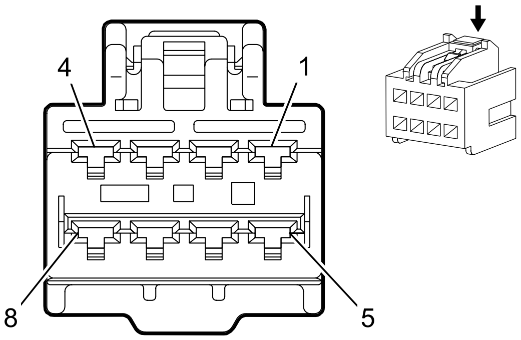
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79P Window Switch - Passenger (-A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1250	Ground	I	—
2	0.35	VT/GY	2765	Power Window Switch Right Front Express Signal	I	—
3	0.35	BN/YE	167	Power Window Master Switch Right Front Down Signal	I	—
4	0.5	RD/D-BU	840	Battery Positive Voltage	I	—
5	0.35	YE	6817	LED Backlight Dimming Control	I	—
6	0.35	YE/BK	166	Power Window Master Switch Right Front Up Signal	I	—
7 - 12	—	—	—	Not Occupied	—	—

S79RR Window Switch - Right Rear



Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 15491286

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 2.8 Series (BK)

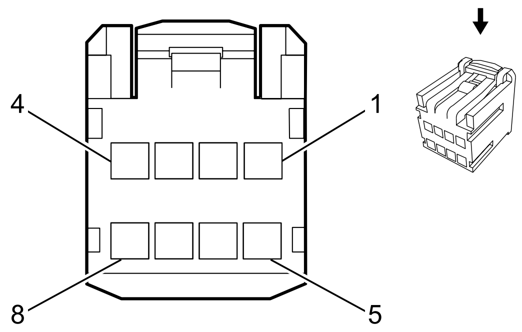
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S79RR Window Switch - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN/GY	6135	Local Interconnect Network Serial Data Bus 4	I	—
2	0.35	GY/WH	748	Right Rear Door Ajar Switch Signal	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	2.5	BK	1250	Ground	I	—
6	2.5	D-BU/GY	670	Power Window Motor Right Rear Up Control	I	—
7	2.5	GN/BK	671	Power Window Motor Right Rear Down Control	I	—
8	2.5	RD/WH	1340	Battery Positive Voltage	I	—

S91 Park Brake Control Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13609516

Service Connector: 13576541

Description: 8-Way F 1.2 HCM Series (BK)

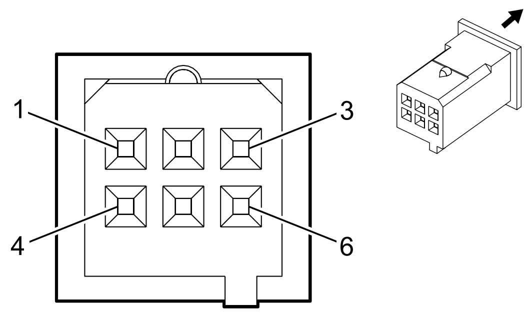
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S91 Park Brake Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	1492	Park Brake Switch Supply Voltage	I	—
2	0.35	D-BU/VT	1134	Park Brake Switch Signal	I	—
3	0.35	YE/RD	7683	Park Brake Release Switch Voltage Reference	I	—
4	0.35	BN	6107	Park Brake Apply Switch Signal	I	—
5	0.35	D-BU/BK	6108	Park Brake Release Switch Signal	I	—
6	0.35	YE	6817	LED Backlight Dimming Control	I	—
7	0.35	GY/RD	7684	Park Brake Apply Switch Voltage Reference	I	—
8	0.35	BK/WH	1851	Signal Ground	I	—

S135 Rollover Protection Disable Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13548426

Service Connector: 13225892

Description: 6-Way F 0.64 Micro-Quadlock Series (NA)

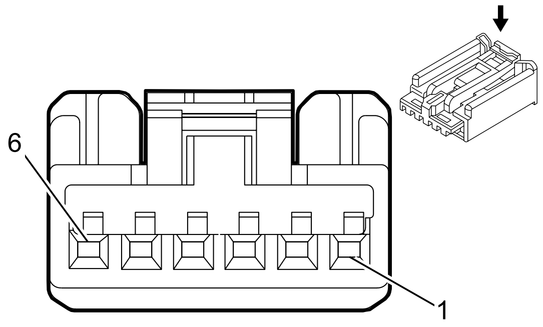
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S135 Rollover Protection Disable Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/OG	371	Passenger IP Module Disable Switch Signal	I	—
2	0.35	D-BU/OG	7328	Passenger IP Module Disable Switch Low Reference	I	—
3 - 6	—	—	—	Not Occupied	—	—

S140 Media Disc Eject Switch



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13595476

Service Connector: 19167753

Description: 6-Way F 0.64 Kaizen Series (BK)

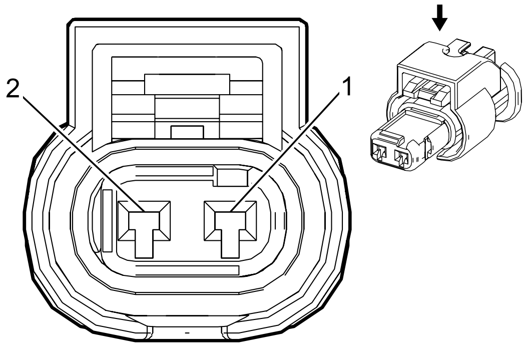
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S140 Media Disc Eject Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD/GN	1540	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH	6816	Indicator Dimming Control	I	—
4	0.35	GY	4016	Remote Media Eject Signal	I	—
5	0.5	YE	6817	LED Backlight Dimming Control	I	—
6	0.35	BK	2550	Ground	I	—

S141 Liftgate Window Unlatch Switch



Connector Part Information

Harness Type: Liftgate

OEM Connector: 13761652

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

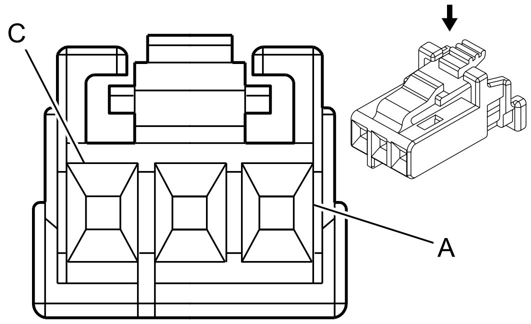
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S141 Liftgate Window Unlatch Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1450	Ground	I	—
2	0.35	GY/GN	6190	Lift Glass/Rear Compartment Lid Exterior Release Signal	I	—

S143L Folding Seat Control Switch - 2nd Row Left



Connector Part Information

Harness Type: Body

OEM Connector: 15417063

Service Connector: 88987857

Description: 3-Way F 0.64 Micro-Pack Series (BK)

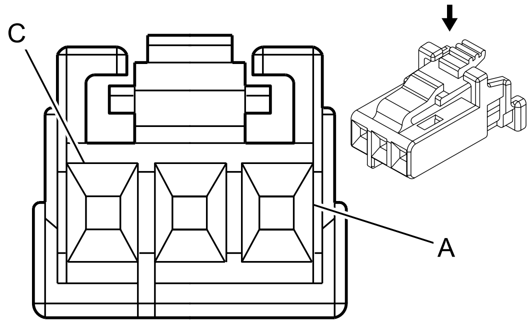
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S143L Folding Seat Control Switch - 2nd Row Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GN	6808	Left Rear Seat Fold Tumble Control	I	—
B	—	—	—	Not Occupied	—	—
C	0.5	YE/BK	5813	Park Enable Control	I	—

S143R Folding Seat Control Switch - 2nd Row Right (ATN/ATT)



Connector Part Information

Harness Type: Body Extension

OEM Connector: 15417063

Service Connector: 88987857

Description: 3-Way F 0.64 Micro-Pack Series (BK)

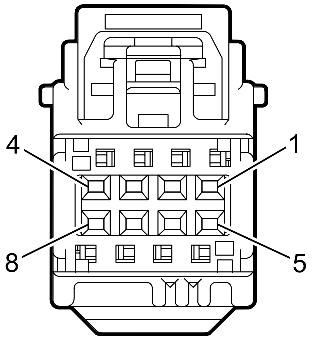
Terminal Part Information

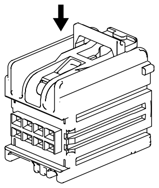
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	Not Required	Not Required	Not Required	Not Required	Not Required

S143R Folding Seat Control Switch - 2nd Row Right (ATN/ATT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BN/WH	6809	Right Rear Seat Fold Tumble Control	I	—
B	—	—	—	Not Occupied	—	—
C	0.5	YE/BK	5813	Park Enable Control	I	—

S144A Folding Seat Control Switch - Rear Compartment 2nd Row





Connector Part Information

Harness Type: Body

OEM Connector: 13518475

Service Connector: 13576542

Description: 8-Way F YESC Kaizen Series (BK)

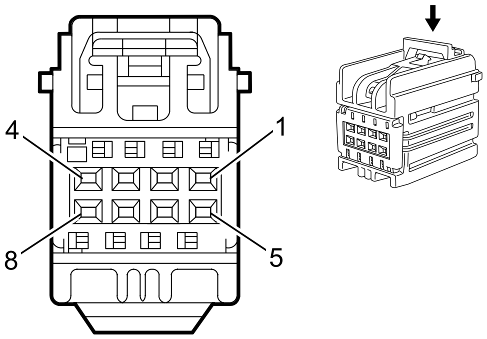
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S144A Folding Seat Control Switch - Rear Compartment 2nd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	YE/BK	5813	Park Enable Control	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	GN	6808	Left Rear Seat Fold Tumble Control	I	—
5	0.5	BN/WH	6809	Right Rear Seat Fold Tumble Control	I	—
6 - 8	—	—	—	Not Occupied	—	—

S144B Folding Seat Control Switch - Rear Compartment 3rd Row



Connector Part Information

Harness Type: Body

OEM Connector: 13551679

Service Connector: 19115653

Description: 8-Way F YESC Kaizen Series (L-GY)

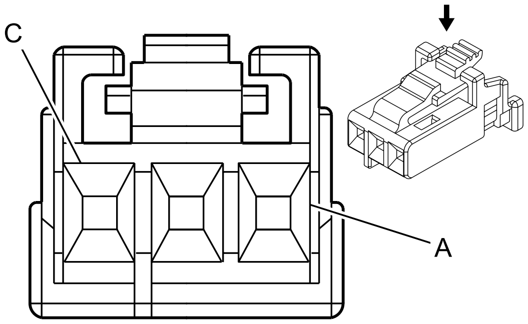
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S144B Folding Seat Control Switch - Rear Compartment 3rd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE/BK	5813	Park Enable Control	I	—
2	0.5	GN	4224	LH Third Row Seat Recline Rearward Signal	I	—
3	0.5	GN/BK	4223	LH Third Row Seat Recline Forward Signal	I	—
4	0.5	YE	4220	RH Third Row Seat Recline Rearward Signal	I	—
5	0.5	YE/BK	4219	RH Third Row Seat Recline Forward Signal	I	—
6 - 8	—	—	—	Not Occupied	—	—

S144R Folding Seat Control Switch - 2nd Row Right



Connector Part Information

Harness Type: Body

OEM Connector: 15417063

Service Connector: 88987857

Description: 3-Way F 0.64 Micro-Pack Series (BK)

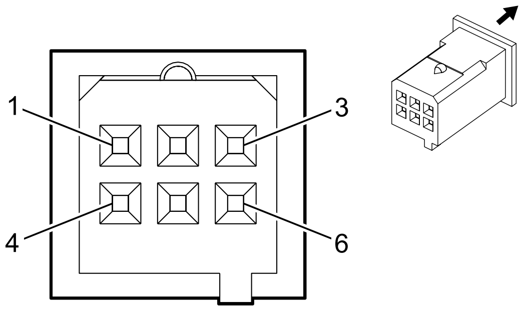
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S144R Folding Seat Control Switch - 2nd Row Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BN/WH	6809	Right Rear Seat Fold Tumble Control	I	—
B	—	—	—	Not Occupied	—	—
C	0.5	YE/BK	5813	Park Enable Control	I	—

S145 Center Console Compartment Cooler Switch (X88/Z88)



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 13548426

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (NA)

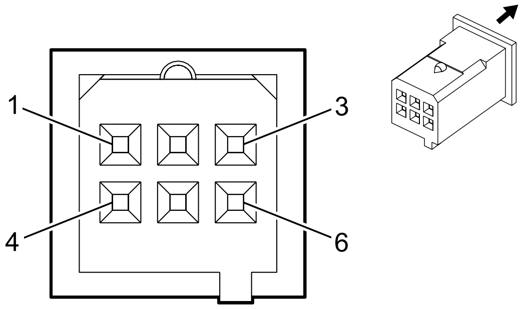
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S145 Center Console Compartment Cooler Switch (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	6817	LED Backlight Dimming Control	I	—
2	0.35	BN	6532	Power Rear Compartment Lid On/Off Control	I	—
3	0.5	BK	1050	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GY/BK	2546	Rear Steering Axle Control Motor Control Phase B	I	—
6	0.5	WH	6816	Indicator Dimming Control	I	—

S145 Center Console Compartment Cooler Switch (Z75)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13548426

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Micro-Quadlock Series (NA)

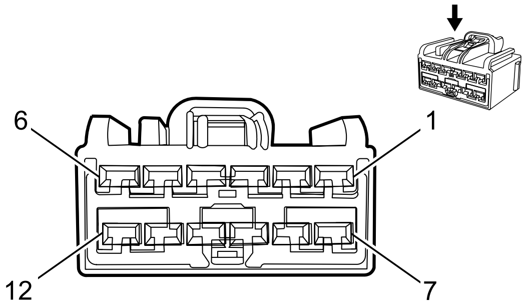
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

S145 Center Console Compartment Cooler Switch (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	6817	LED Backlight Dimming Control	I	—
2	0.35	BN	6532	Power Rear Compartment Lid On/Off Control	I	—
3	0.5	BK	1050	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	GY/BK	2546	Rear Steering Axle Control Motor Control Phase B	I	—
6	0.5	WH	6816	Indicator Dimming Control	I	—

T1 Accessory DC/AC Power Inverter Module



Connector Part Information

Harness Type: Instrument Panel Extension

OEM Connector: 10846814

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 2.8 Kaizen Series (L-GY)

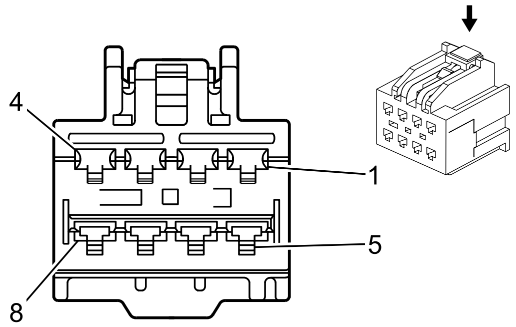
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T1 Accessory DC/AC Power Inverter Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	1.5	BK	5683	120 V AC Phase A	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	2.5	RD/GY	4140	Battery Positive Voltage	I	—
7	1.5	RD	5684	120 V AC Phase B	I	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.35	BARE	514	Low Reference	I	—
11	2.5	BK	1050	Ground	I	—
12	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—

T3 Audio Amplifier X1 (UQA/UQH/UQS+AZ3)



Connector Part Information

Harness Type: Body

OEM Connector: 15491289

Service Connector: 19115652

Description: 8-Way F 2.8 Series (L-GY)

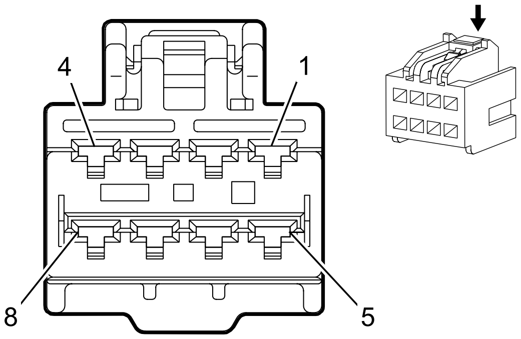
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T3 Audio Amplifier X1 (UQA/UQH/UQS+AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE	200	Right Front Speaker Control (+) 1	I	—
2	—	—	—	Not Occupied	—	—
3	2.5	D-BU	201	Left Front Speaker Control (+) 1	I	—
4	2.5	RD/YE	3740	Battery Positive Voltage	I	—
5	2.5	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
6	—	—	—	Not Occupied	—	—
7	2.5	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
8	2.5	BK	2550	Ground	I	—

T3 Audio Amplifier X1 (UQA/UQH/UQS+D07)



Connector Part Information

Harness Type: Body

OEM Connector: 15491286

Service Connector: 13580111

Description: 8-Way F 2.8 Series (BK)

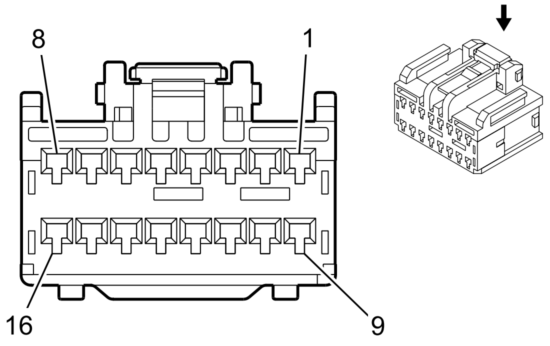
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T3 Audio Amplifier X1 (UQA/UQH/UQS+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	D-BU/GY	346	Left/Rear Subwoofer Speaker Control (+)	I	—
2	1	YE	200	Right Front Speaker Control (+) 1	I	—
3	1	D-BU	201	Left Front Speaker Control (+) 1	I	—
4	2.5	RD/YE	3740	Battery Positive Voltage	I	—
5	2.5	GY/BK	315	Right Subwoofer Speaker (-) Low Reference	I	—
6	1	YE/BK	117	Right Front Speaker Signal (-) 1	I	—
7	1	BN/D-BU	118	Left Front Speaker Signal (-) 1	I	—
8	2.5	BK	2550	Ground	I	—

T3 Audio Amplifier X2 (UQA/UQH/UQS)



Connector Part Information

Harness Type: Body

OEM Connector: 15489823

Service Connector: 15134091

Description: 16-Way F 1.5 Series (BK)

Terminal Part Information

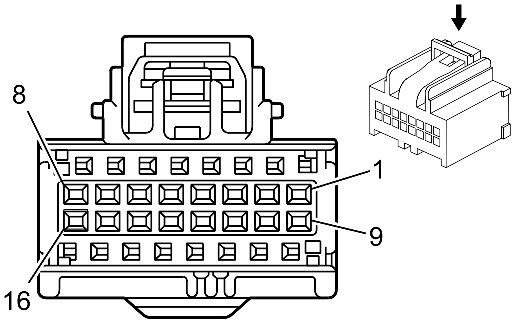
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575790	J-35616-2A (GY)	J-38125-553	15496302	Delphi 5	2	A

T3 Audio Amplifier X2 (UQA/UQH/UQS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE/GY	1956	Left Front Tweeter Speaker (-) Low Reference	I	—
2	0.75	D-BU/YE	1960	Front Center Speaker (-) Low Reference	I	—
3	1	YE/BN	1859	Left Rear Midrange Speaker Control (+)	I	—
4	0.75	BN/GN	1852	Right Front Tweeter Speaker Control (+)	I	—
5	0.75	YE/D-BU	1856	Left Front Tweeter Speaker Control (+)	I	—
6	1	WH	46	Right Rear Speaker Control (+)	I	—
7	1	GN	199	Left Rear Speaker Control (+)	I	—
8	—	—	—	Not Occupied	—	—

9	0.75	YE/D-BU	1856	Left Front Tweeter Speaker Control (+)	I	—
10	0.75	YE/WH	1860	Front Center Speaker Control (+)	I	—
11	1	WH/BK	1959	Left Rear Midrange Speaker (-) Low Reference	I	—
12	0.75	VT/BN	1952	Right Front Tweeter Speaker (-) Low Reference	I	—
13	0.75	YE/GY	1956	Left Front Tweeter Speaker (-) Low Reference	I	—
14	1	D-BU/BK	115	Right Rear Speaker Signal (-)	I	—
15	1	GN/BK	116	Left Rear Speaker Signal (-)	I	—
16	—	—	—	Not Occupied	—	—

T3 Audio Amplifier X3 (UQA/UQH/UQS)



Connector Part Information

Harness Type: Body

OEM Connector: 15491285

Service Connector: 15136073

Description: 16-Way F 0.64 Kaizen Series (BK)

Terminal Part Information

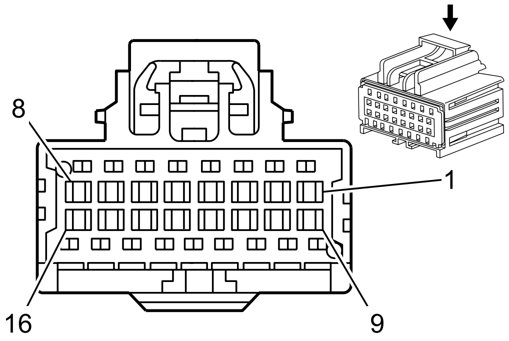
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
II	13579945	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

T3 Audio Amplifier X3 (UQA/UQH/UQS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY/GN	1102	Low Speed GMLAN Serial Data #2	II	UVH
	0.5	GY/GN	1102	Low Speed GMLAN Serial Data #2	I	-UVH
2	0.35	VT/D-BU	6091	Crankshaft Position Sensor Replicated Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	GN/BN	3005	Noise Reduction Microphone 1 Signal	I	—
5	0.35	D-BU/YE	3006	Noise Reduction Microphone 2 Signal	I	—
6	0.35	GY/D-BU	3007	Noise Reduction Microphone 3 Signal	I	—
7	—	—	—	Not Occupied	—	—
8	0.75	BN/GN	1852	Right Front Tweeter Speaker Control (+)	II	—

8	0.75	BN/GN	1852	Right Front Tweeter Speaker Control (+)	II	—
9 - 11	—	—	—	Not Occupied	—	—
12	0.35	GN/BK	3008	Noise Reduction Microphone 1 Low Reference	I	—
13	0.35	D-BU/BK	3009	Noise Reduction Microphone 2 Low Reference	I	—
14	0.35	GY/BN	3010	Noise Reduction Microphone 3 Low Reference	I	—
15	—	—	—	Not Occupied	—	—
16	0.75	VT/BN	1952	Right Front Tweeter Speaker (-) Low Reference	II	—

T3 Audio Amplifier X4 (UQA/UQH/UQS)



Connector Part Information

Harness Type: Body

OEM Connector: 15466054

Service Connector: 15136074

Description: 16-Way F 0.64 Kaizen Series (BN)

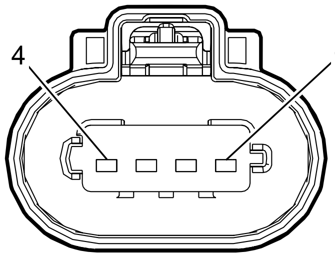
Terminal Part Information

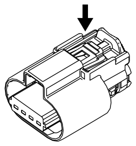
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13579944	J-35616-64B (LT BU)	J-38125-215A	Not Available	Not Available	Not Available	Not Available

T3 Audio Amplifier X4 (UQA/UQH/UQS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	WH/GN	3997	MOST Serial Data (-)	I	—
4	0.35	GY/VT	3998	MOST Serial Data (+)	I	—
5	0.35	YE	3997	MOST Serial Data (-)	I	—
6	0.35	GN	3998	MOST Serial Data (+)	I	—
7 - 13	—	—	—	Not Occupied	—	—
14	0.35	WH/VT	3999	MOST Control	I	—
15 - 16	—	—	—	Not Occupied	—	—

T8A Ignition Coil 1 (L83/L86)





Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

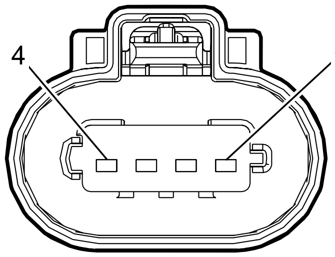
Terminal Part Information

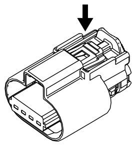
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8A Ignition Coil 1 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	D-BU/VT	2121	Ignition Control 1	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8A Ignition Coil 1 (L86)





Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

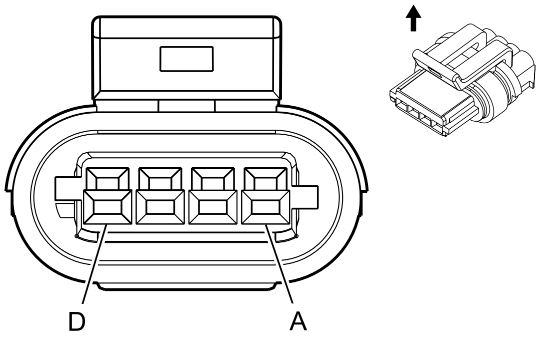
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8A Ignition Coil 1 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	D-BU/VT	2121	Ignition Control 1	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8A Ignition Coil 1 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

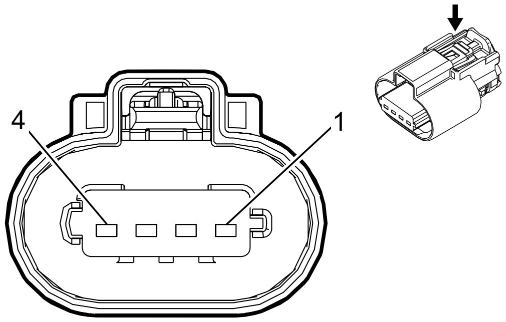
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8A Ignition Coil 1 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	VT	2121	Ignition Control 1	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8B Ignition Coil 2 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

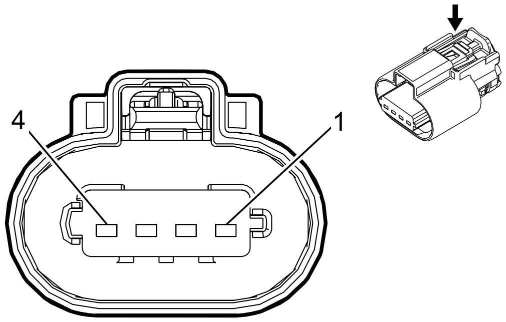
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8B Ignition Coil 2 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	D-BU/WH	2122	Ignition Control 2	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8B Ignition Coil 2 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

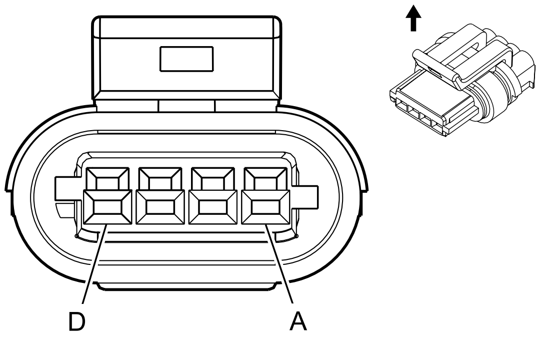
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8B Ignition Coil 2 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	D-BU/WH	2122	Ignition Control 2	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8B Ignition Coil 2 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

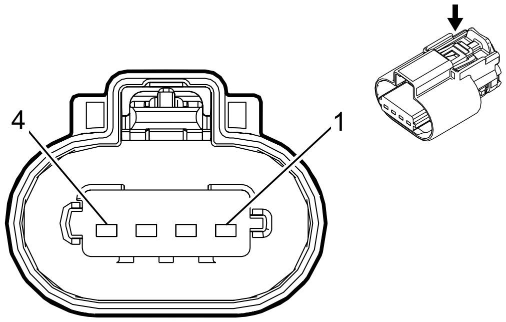
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8B Ignition Coil 2 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	RD	2127	Ignition Control 7	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8C Ignition Coil 3 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

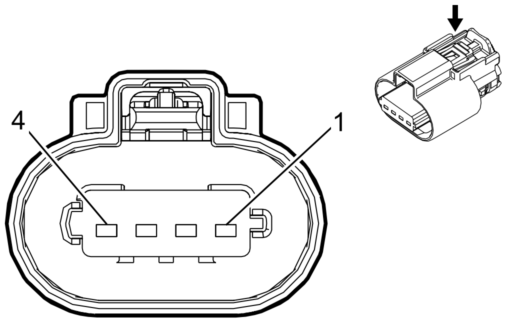
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8C Ignition Coil 3 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN/D-BU	2123	Ignition Control 3	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8C Ignition Coil 3 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

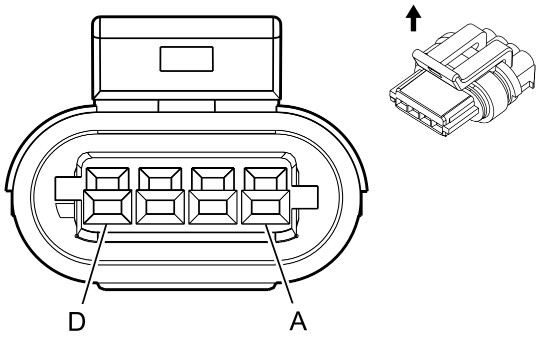
Description: 4-Way F 150 MX Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8C Ignition Coil 3 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN/D-BU	2123	Ignition Control 3	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

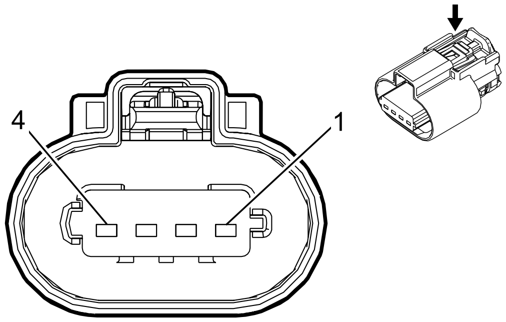
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8C Ignition Coil 3 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	BU	2123	Ignition Control 3	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8D Ignition Coil 4 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

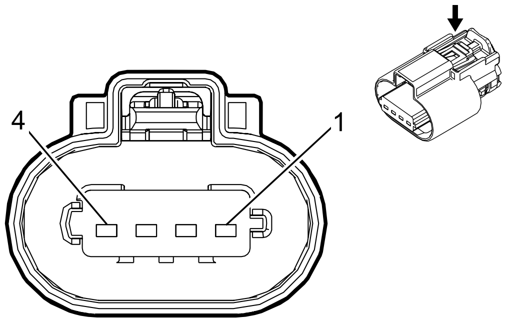
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8D Ignition Coil 4 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	YE/D-BU	2124	Ignition Control 4	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8D Ignition Coil 4 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

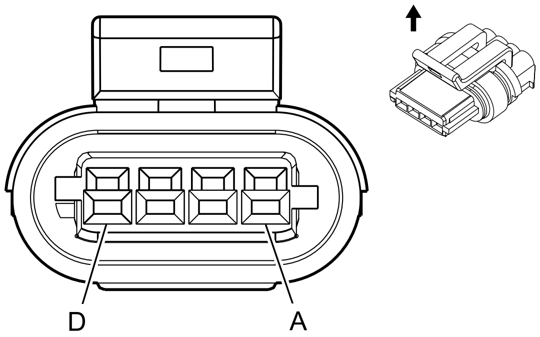
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8D Ignition Coil 4 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	YE/D-BU	2124	Ignition Control 4	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8D Ignition Coil 4 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

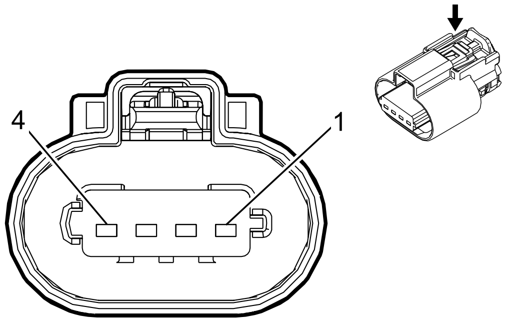
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8D Ignition Coil 4 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	GN	2125	Ignition Control 5	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8E Ignition Coil 5 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

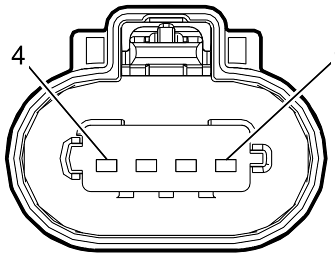
Terminal Part Information

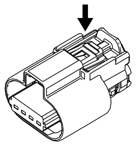
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8E Ignition Coil 5 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	D-BU/GY	2125	Ignition Control 5	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8E Ignition Coil 5 (L86)





Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

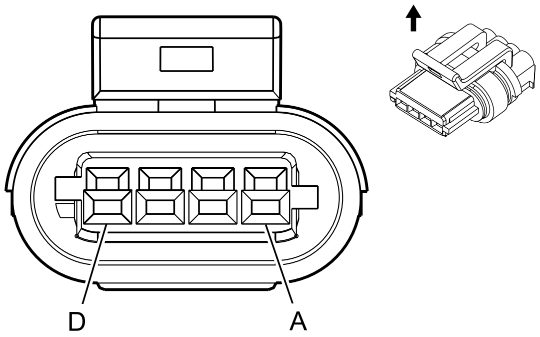
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8E Ignition Coil 5 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	D-BU/GY	2125	Ignition Control 5	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8E Ignition Coil 5 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

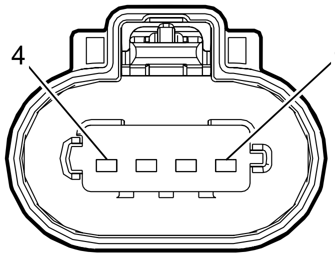
Terminal Part Information

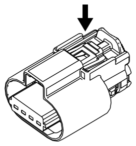
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8E Ignition Coil 5 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	GN	2125	Ignition Control 5	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8F Ignition Coil 6 (L83/L86)





Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

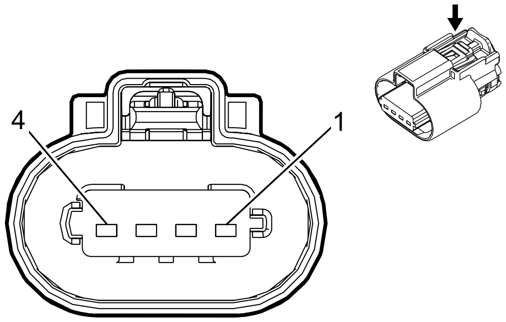
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8F Ignition Coil 6 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	BN/D-BU	2126	Ignition Control 6	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8F Ignition Coil 6 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

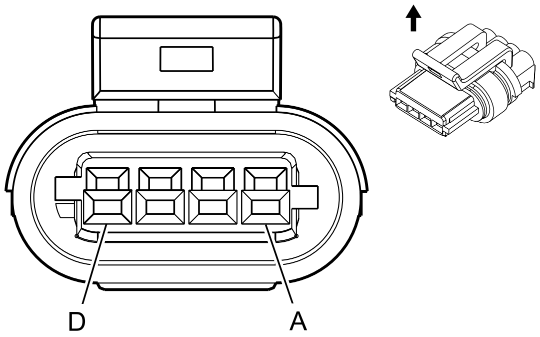
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8F Ignition Coil 6 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	BN/D-BU	2126	Ignition Control 6	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8F Ignition Coil 6 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

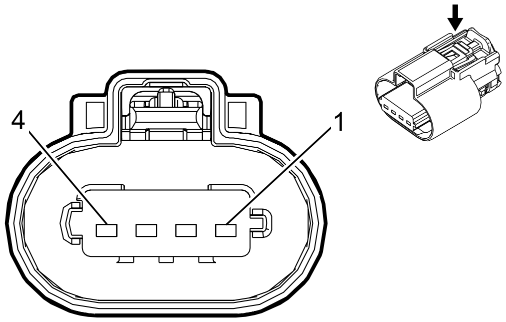
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8F Ignition Coil 6 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	BU	2123	Ignition Control 3	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8G Ignition Coil 7 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

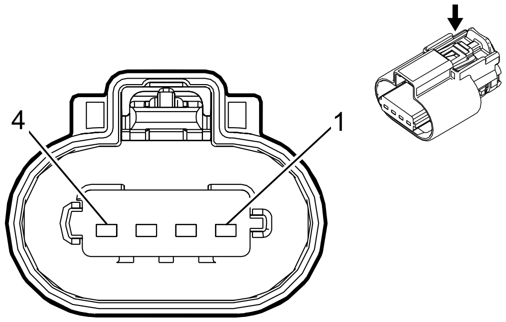
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8G Ignition Coil 7 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN/GY	2127	Ignition Control 7	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8G Ignition Coil 7 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

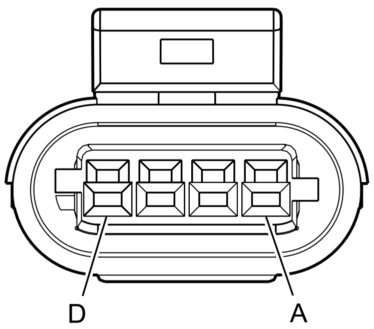
Terminal Part Information

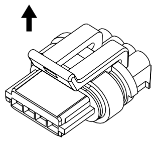
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8G Ignition Coil 7 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/D-BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN/GY	2127	Ignition Control 7	I	—
4	0.75	VT/D-BU	5291	Powertrain Main Relay Fused Supply 2	I	—

T8G Ignition Coil 7 (L96)





Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

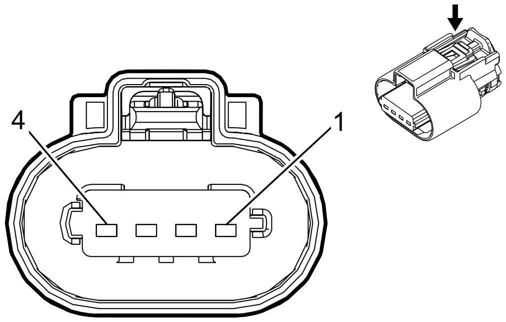
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8G Ignition Coil 7 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	RD	2127	Ignition Control 7	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T8H Ignition Coil 8 (L83/L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

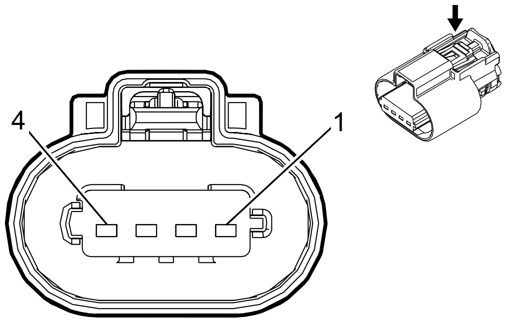
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8H Ignition Coil 8 (L83/L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	VT/WH	2128	Ignition Control 8	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8H Ignition Coil 8 (L86)



Connector Part Information

Harness Type: Engine

OEM Connector: 13863211

Service Connector: 19301722

Description: 4-Way F 150 MX Series, Sealed (BK)

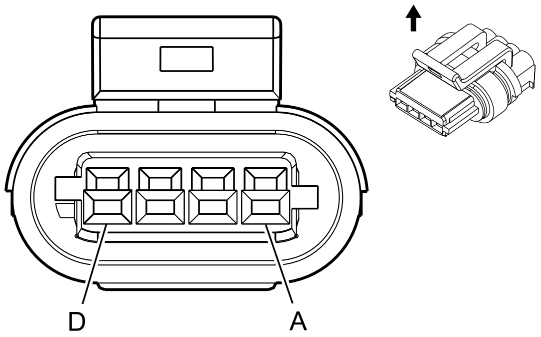
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8H Ignition Coil 8 (L86)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	350	Ground	I	—
2	0.5	BK/GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	VT/WH	2128	Ignition Control 8	I	—
4	0.75	VT/D-BU	5292	Powertrain Main Relay Fused Supply 3	I	—

T8H Ignition Coil 8 (L96)



Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15439568

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 GT Series, Sealed (BK)

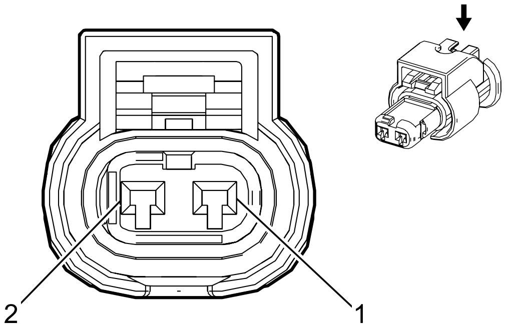
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T8H Ignition Coil 8 (L96)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.8	BK	151	Signal Ground	I	—
B	0.5	BN	2129	Ignition Control Low Reference Bank 1	I	—
C	0.5	VT	2121	Ignition Control 1	I	—
D	0.8	PK	39	Run/Crank Ignition 1 Voltage	I	—

T10E Keyless Entry Antenna - Rear Compartment



Connector Part Information

Harness Type: Body

OEM Connector: 13761653

Service Connector: 19332213

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

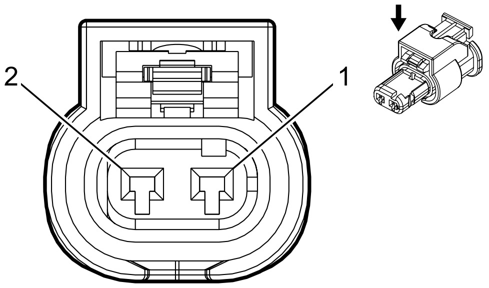
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T10E Keyless Entry Antenna - Rear Compartment

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH/GN	3556	Passive Start Interior Antenna 3 Signal Hi	I	—
2	0.35	GN	3557	Passive Start Interior Antenna 3 Signal Lo	I	—

T10G Keyless Entry Antenna - Rear Fascia



Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13627836

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

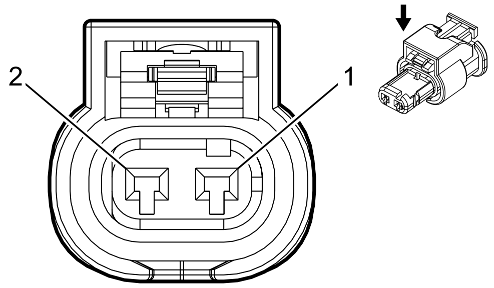
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T10G Keyless Entry Antenna - Rear Fascia

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN/GN	3568	Passive Entry Rear Closure Antenna Signal Hi	I	—
2	0.5	GN/GY	3569	Passive Entry Rear Closure Antenna Signal Lo	I	—

T10J Keyless Entry Antenna - Center Console Front



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13627836

Service Connector: 13587957

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

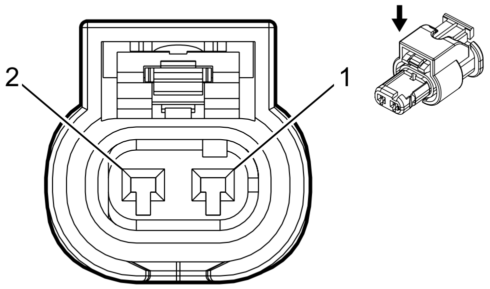
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T10J Keyless Entry Antenna - Center Console Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN/BK	3552	Passive Start Interior Antenna 1 Signal Hi	I	—
2	0.35	WH	3553	Passive Start Interior Antenna 1 Signal Lo	I	—

T10K Keyless Entry Antenna - Center Console Rear



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13627836

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCP Series, Sealed (BK)

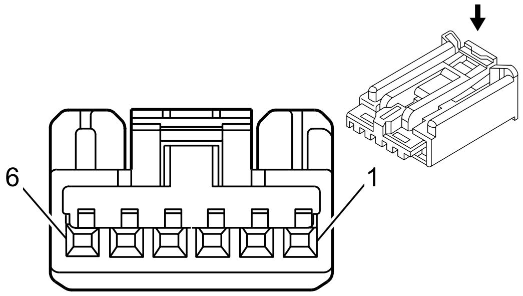
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T10K Keyless Entry Antenna - Center Console Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU	3554	Passive Start Interior Antenna 2 Signal Hi	I	—
2	0.35	GY/BK	3555	Passive Start Interior Antenna 2 Signal Lo	I	—

T22 Mobile Device Wireless Charger Module



Connector Part Information

Harness Type: Floor Console Extension

OEM Connector: 13595475

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Series (NA)

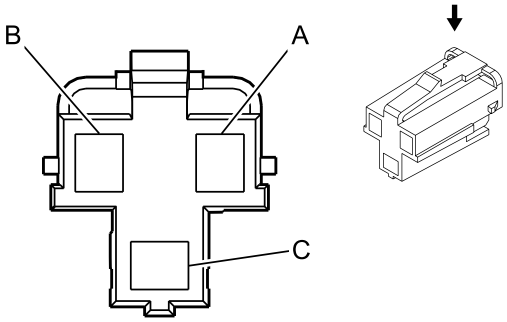
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

T22 Mobile Device Wireless Charger Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT/YE	43	Accessory Ignition Voltage	I	—
2	0.75	BK	1050	Ground	I	—
3	0.35	GN	4512	Wireless Charging System Charge Indicator Control	I	—
4 - 6	—	—	—	Not Occupied	—	—

X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

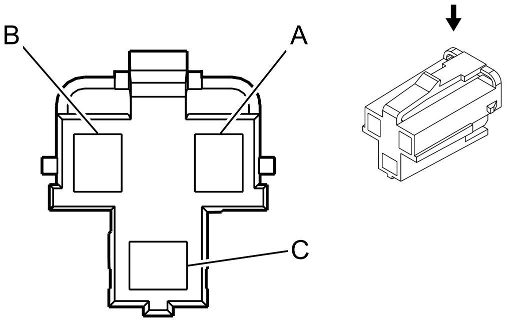
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

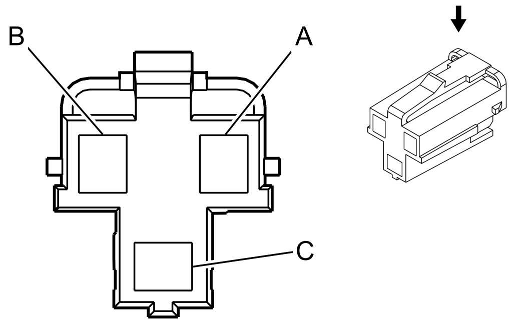
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment ((X88/Z88)+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80D Accessory Power Receptacle - Center Console Compartment (AZ3)



Connector Part Information

Harness Type: Center Seat

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

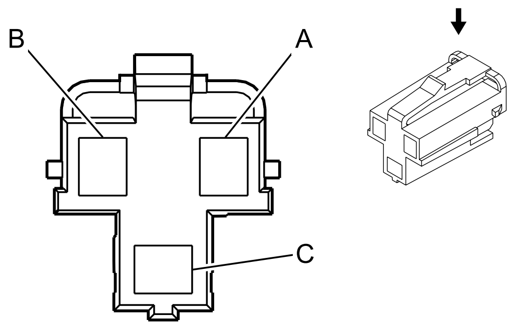
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	243	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1250	Ground	I	—

X80D Accessory Power Receptacle - Center Console Compartment (Z75+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

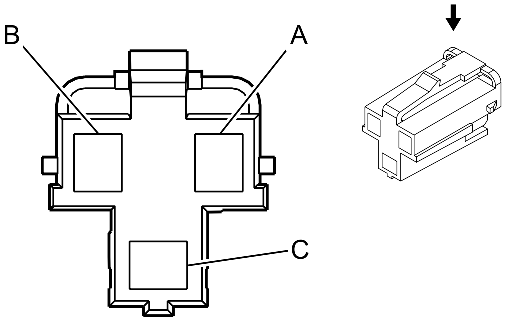
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment (Z75+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80D Accessory Power Receptacle - Center Console Compartment (Z75+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

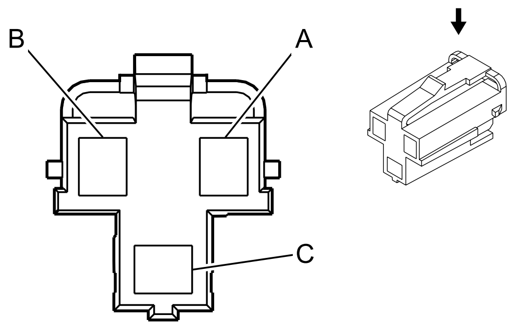
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80D Accessory Power Receptacle - Center Console Compartment (Z75+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80E Accessory Power Receptacle - Center Seat



Connector Part Information

Harness Type: Center Seat

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

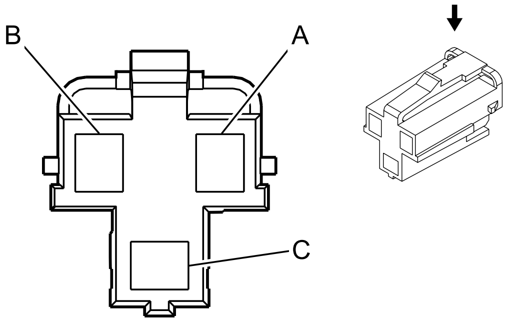
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80E Accessory Power Receptacle - Center Seat

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	143	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1250	Ground	I	—

X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+D07)



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

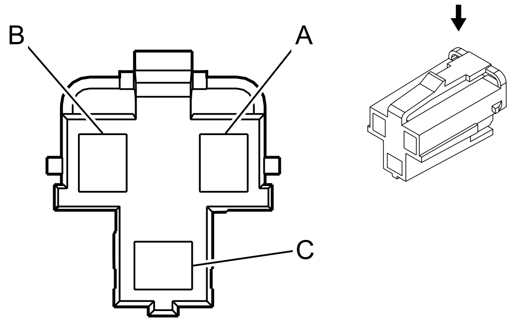
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+DCK)



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

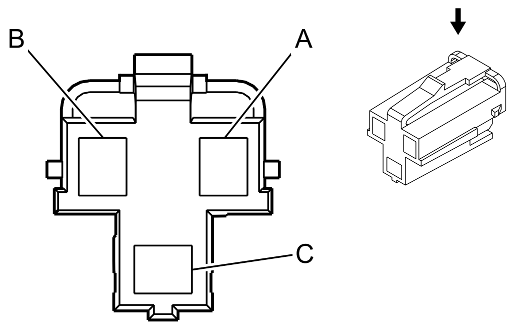
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80G Accessory Power Receptacle - Instrument Panel ((X88/Z88)+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80G Accessory Power Receptacle - Instrument Panel (AZ3)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12176836

Service Connector: 19257374

Description: 3-Way F 280 Metri-Pack Series (GY)

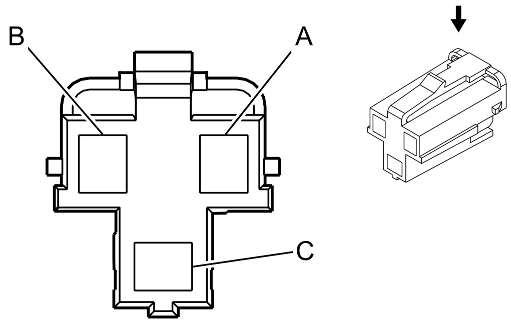
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80G Accessory Power Receptacle - Instrument Panel (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/BN	4240	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80G Accessory Power Receptacle - Instrument Panel (Z75)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

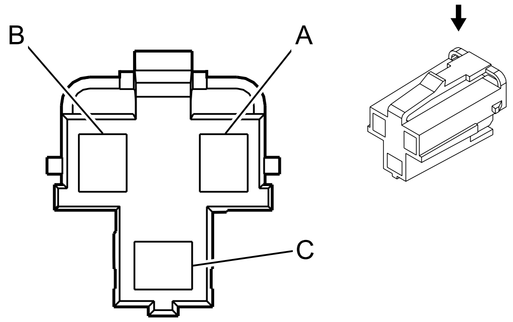
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80G Accessory Power Receptacle - Instrument Panel (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80L Accessory Power Receptacle - Center Console Rear



Connector Part Information

Harness Type: Floor Console

OEM Connector: 12176836

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 280 Metri-Pack Series (GY)

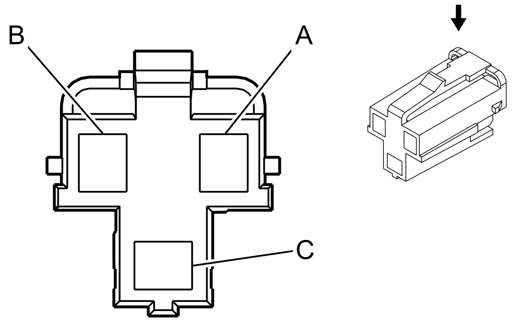
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80L Accessory Power Receptacle - Center Console Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	VT/YE	243	Accessory Ignition Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80RL Accessory Power Receptacle - Rear Compartment Left



Connector Part Information

Harness Type: Body

OEM Connector: 12176836

Service Connector: 19257374

Description: 3-Way F 280 Metri-Pack Series (GY)

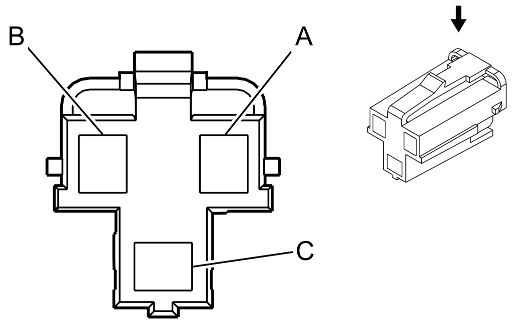
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80RL Accessory Power Receptacle - Rear Compartment Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/D-BU	6040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1150	Ground	I	—

X80RR Accessory Power Receptacle - Rear Compartment Right



Connector Part Information

Harness Type: Body

OEM Connector: 12176836

Service Connector: 19257374

Description: 3-Way F 280 Metri-Pack Series (GY)

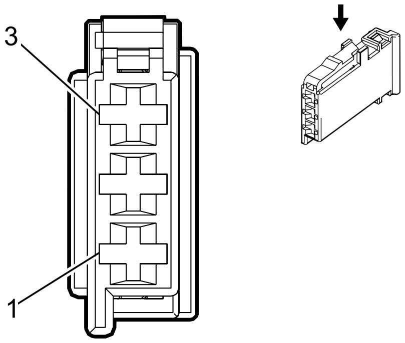
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X80RR Accessory Power Receptacle - Rear Compartment Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD/D-BU	6040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1450	Ground	I	—

X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 10865339

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Micro-Timer Series (BK)

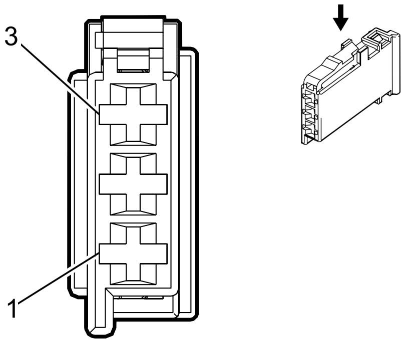
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 10865339

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Micro-Timer Series (BK)

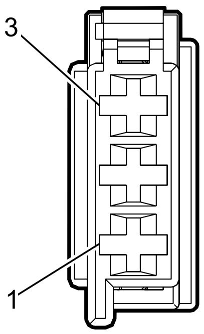
Terminal Part Information

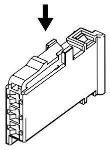
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X1 ((X88/Z88)+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X1 (AZ3)





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10865339

Service Connector: 93186706

Description: 3-Way F 1.6 Micro-Timer Series (BK)

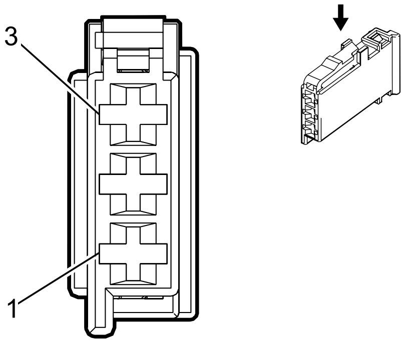
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X1 (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X1 (Z75+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 10865339

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Micro-Timer Series (BK)

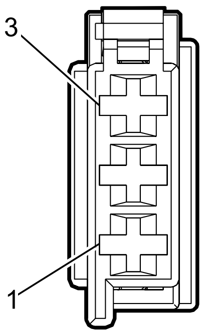
Terminal Part Information

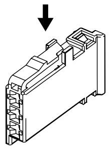
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X1 (Z75+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X1 (Z75+DCK)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 10865339

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Micro-Timer Series (BK)

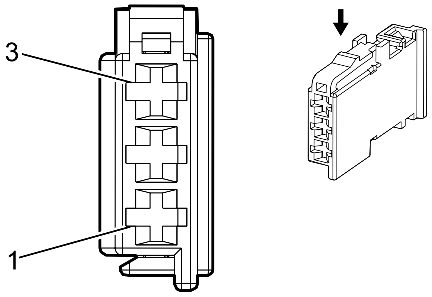
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X1 (Z75+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT/BN	300	Run Ignition 3 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	5683	120 V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13648774

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Timer Series, Sealed (GY)

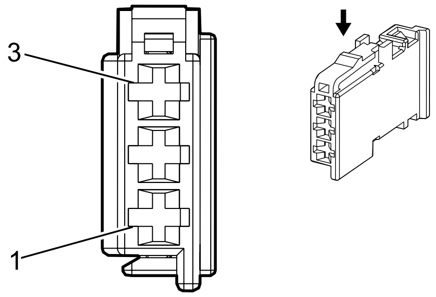
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	RD	5684	120 V AC Phase B	I	—

X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13648774

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Timer Series, Sealed (GY)

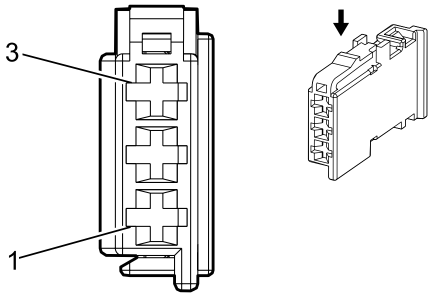
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X2 ((X88/Z88)+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	RD	5684	120 V AC Phase B	I	—

X81 Accessory Power Receptacle - 110V AC X2 (AZ3)



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13648774

Service Connector: 13583924

Description: 3-Way F 1.6 Timer Series, Sealed (GY)

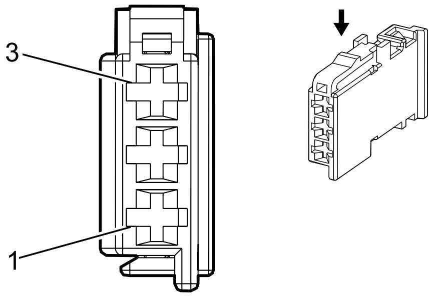
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X2 (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	RD	5684	120 V AC Phase B	I	—

X81 Accessory Power Receptacle - 110V AC X2 (Z75+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13648774

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Timer Series, Sealed (GY)

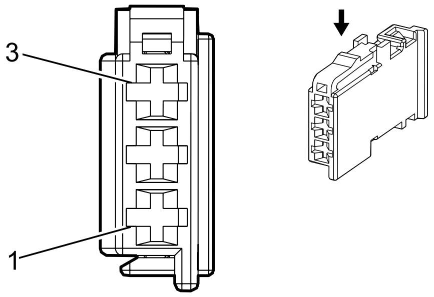
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X2 (Z75+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	RD	5684	120 V AC Phase B	I	—

X81 Accessory Power Receptacle - 110V AC X2 (Z75+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13648774

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.6 Timer Series, Sealed (GY)

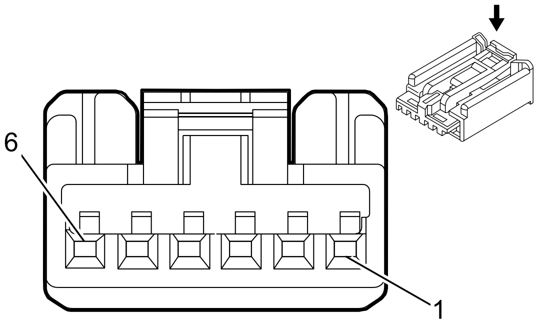
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X81 Accessory Power Receptacle - 110V AC X2 (Z75+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	D-BU/BN	6807	DC To AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	RD	5684	120 V AC Phase B	I	—

X82 Audio/Video Input Adapter X1



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

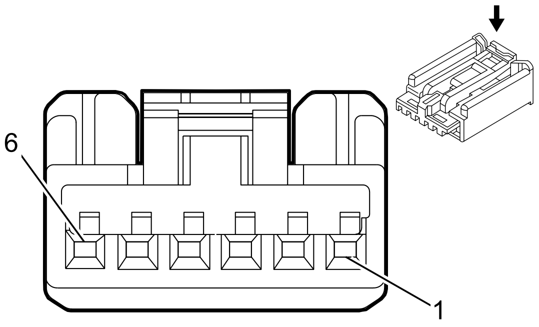
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X82 Audio/Video Input Adapter X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN/WH	3355	Left Rear Seat Audio Headphone Signal	I	—
2	0.35	BN/GY	3357	Right Rear Seat Audio Headphone Signal	I	—
3	0.35	D-BU/VT	3356	Rear Seat Audio Headphone Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO3)



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

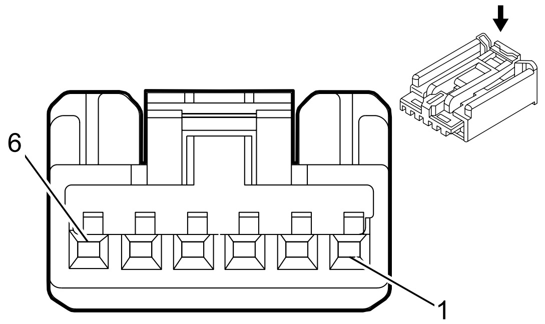
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO5/IO6)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

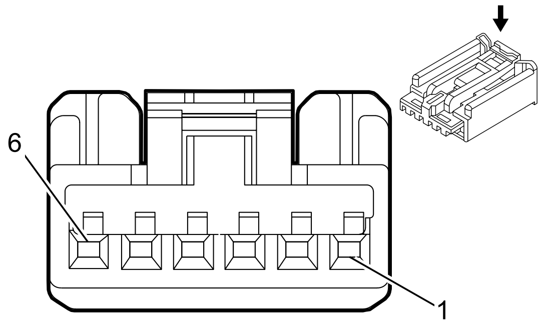
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 ((X88/Z88)+D07+IO5/IO6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 ((X88/Z88)+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

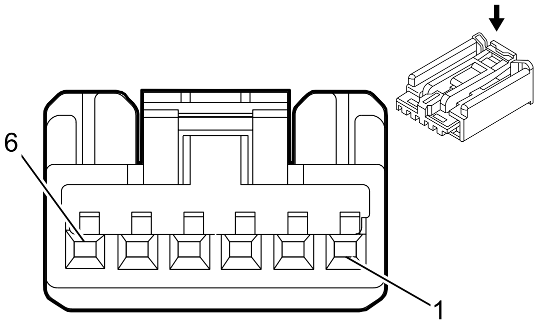
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 ((X88/Z88)+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 (AZ3)



Connector Part Information

Harness Type: Center Seat

OEM Connector: 15269798

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

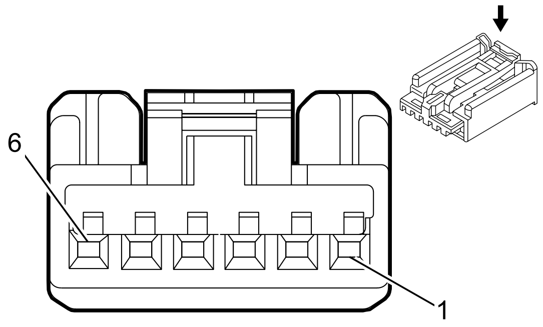
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 (Z75+D07)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

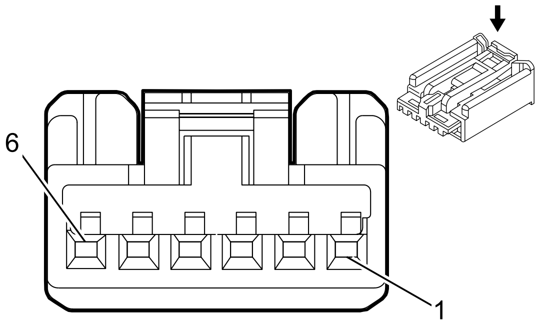
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 (Z75+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X83 Auxiliary Audio Input X1 (Z75+DCK)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

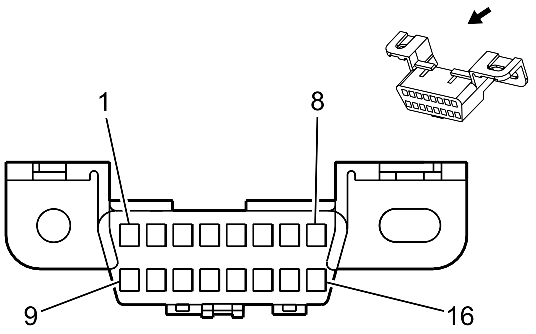
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X83 Auxiliary Audio Input X1 (Z75+DCK)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	5839	Left Auxiliary Audio Signal 2	I	—
2	0.35	GN	5841	Right Auxiliary Audio Signal 2	I	—
3	0.35	VT	5843	Auxiliary Audio Common Signal	I	—
4	0.35	BK	2550	Ground	I	—
5	0.35	D-BU	2060	Auxiliary Detection Signal	I	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X84 Data Link Connector



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12110250

Service Connector: 12110250

Description: 16-Way F 150 Metri-Pack Series (BK)

Terminal Part Information

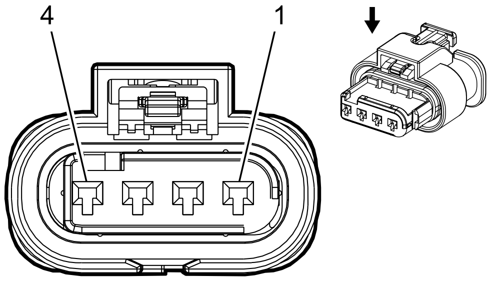
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575725	J-35616-14 (GN)	J-38125-12A	12129484	Delphi 19	E	A
II	13575725	J-35616-14 (GN)	J-38125-12A	12129484	Delphi 19	E	C

X84 Data Link Connector

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
2	—	—	—	Not Occupied	—	—
3	0.5	D-BU/VT	3813	High Speed GMLAN Serial Data (+) 4	II	—
4	1	BK	1050	Ground	I	—
5	0.75	BK/WH	1851	Signal Ground	I	—
6	0.5	D-BU	2500	High Speed GMLAN Serial Data (+) 1	II	—
7 - 10	—	—	—	Not Occupied	—	—
11	0.5	WH	3811	High Speed GMLAN Serial Data (-) 4	II	—

12	0.5	D-BU/YE	6105	High Speed GMLAN Serial Data (+) 2	II	—
13	0.5	WH	6106	High Speed GMLAN Serial Data (-) 2	II	—
14	0.5	WH	2501	High Speed GMLAN Serial Data (-) 1	II	—
15	—	—	—	Not Occupied	—	—
16	0.5	RD/WH	640	Battery Positive Voltage	II	—

X85 Steering Wheel Air Bag Coil



Connector Part Information

Harness Type: Body

OEM Connector: 13854531

Service Connector: 13586137

Description: 4-Way F 1.2 Series, Sealed (YE)

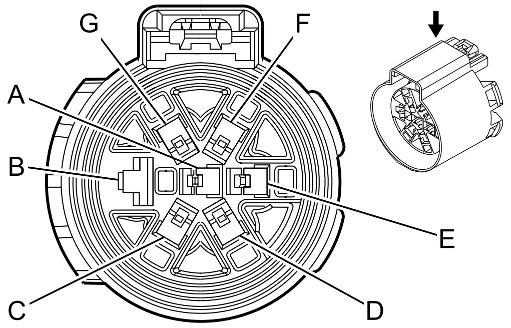
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X85 Steering Wheel Air Bag Coil

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG/VT	3021	Steering Wheel Module Stage 1 High Control	I	—
2	0.35	BN/OG	3020	Steering Wheel Module Stage 1 Low Control	I	—
3	0.35	OG/GN	3023	Steering Wheel Module Stage 2 High Control	I	—
4	0.35	WH/OG	3022	Steering Wheel Module Stage 2 Low Control	I	—

X88 Trailer Connector



Connector Part Information

Harness Type: Chassis

OEM Connector: 13857223

Service Connector: 13583927

Description: 7-Way F 280, 630 Metri-Pack Series, Sealed (BK)

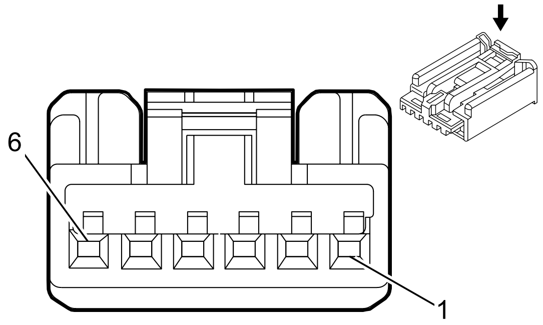
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X88 Trailer Connector

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	WH/GN	1624	Trailer Backup Lamp Control	II	—
B	5	WH	22	Trailer Ground	I	—
C	2.5	D-BU	47	Trailer Auxiliary Control	II	—
D	0.75	GN/VT	1619	Right Rear Trailer Stop/Turn Lamp Control	II	—
E	4	RD/GN	742	Battery Positive Voltage	II	—
F	1.5	GY/BN	2109	Trailer Park Lamp Control	II	—
G	0.75	YE/GY	1618	Left Rear Trailer Stop/Turn Lamp Control	II	—

X92 USB Receptacle (X88/Z88)



Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

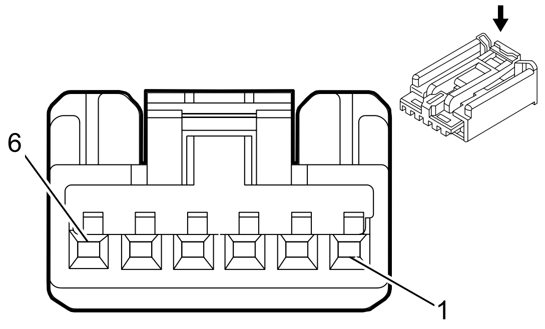
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X92 USB Receptacle (X88/Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BK	2550	Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

X92 USB Receptacle (Z75)



Connector Part Information

Harness Type: Floor Console

OEM Connector: 13595476

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 0.64 Kaizen Series (BK)

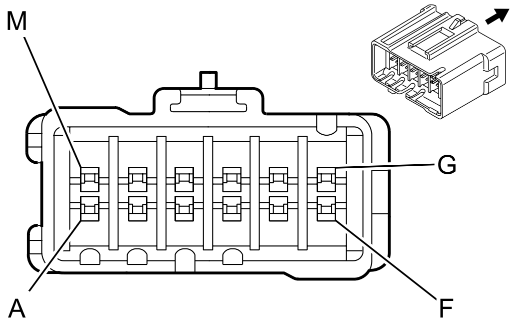
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-64B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X92 USB Receptacle (Z75)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BK	2550	Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	RD/VT	340	Battery Positive Voltage	I	—

JX200 Splice Pack



Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 15305291

Service Connector: 15305291

Description: 12-Way F 280 Metri-Pack Series (BK)

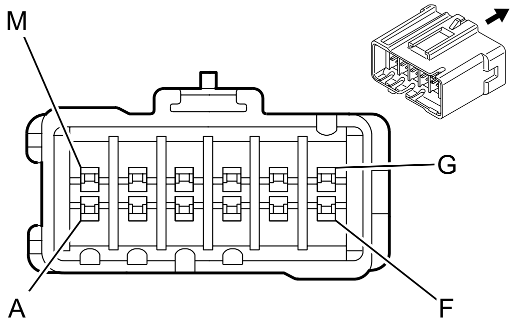
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	4
II	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	A

JX200 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
B	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
C - D	—	—	—	Not Occupied	—	—
E	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
F - H	—	—	—	Not Occupied	—	—
J	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
K	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
L	—	—	—	Not Occupied	—	—
M	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—

JX300 Splice Pack



Connector Part Information

Harness Type: Body

OEM Connector: 15305291

Service Connector: 15305291

Description: 12-Way F 280 Metri-Pack Series (BK)

Terminal Part Information

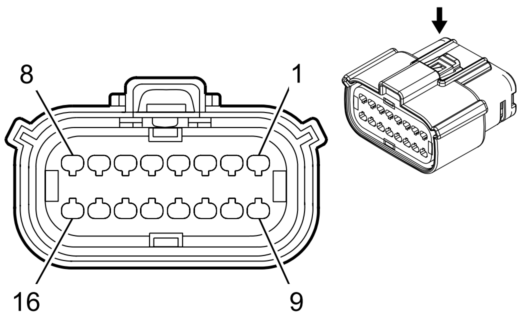
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	4
II	13575721	J-35616-4A (PU)	J-38125-553	12110844	Delphi 4	E	A

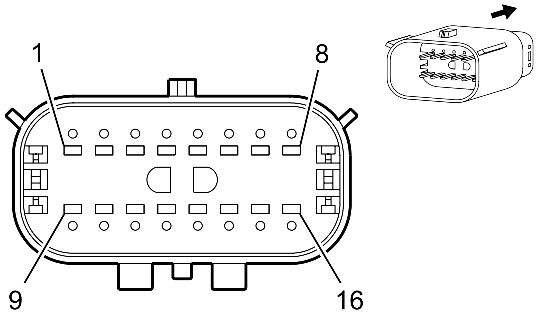
JX300 Splice Pack

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
B	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
C	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
D	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
E	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
F	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
G	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
H	—	—	—	Not Occupied	—	—

H	—	—	—	Not Occupied	—	—
J	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
K	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
L	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
M	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—

X100 Front Bumper Harness to Forward Lamp Harness (X88/Z88)





Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13778557

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 15533030

Service Connector: 19300393

Description: 16-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

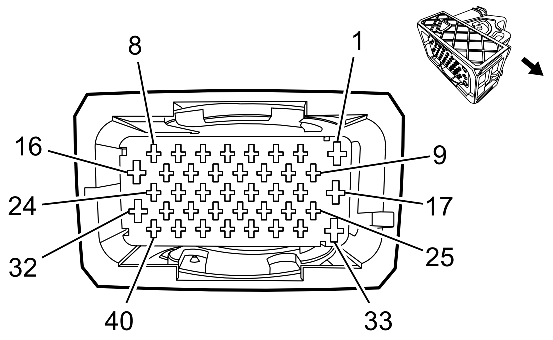
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

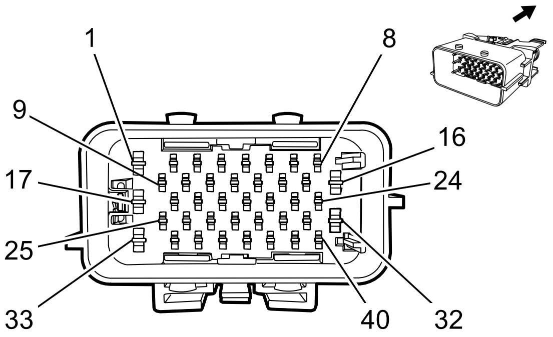
X100 Front Bumper Harness to Forward Lamp Harness (X88/Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	150	I	—	Ground	1	0.75	BK	150	II	—
2	0.5	BK	250	I	—	Ground	2	1	BK	250	II	—

3	0.5	BN/VT	2234	I	—	Front Fog Lamp Control	3	0.5	BN/VT	2234	II	—
4	0.5	YE/GN	5213	I	—	Front Parking Left/Right/Mid Sensor	4	0.5	YE/VT	5213	II	—
5	0.5	VT/WH	5215	I	—	Front Parking Left Corner Sensor	5	0.5	VT/WH	5215	II	—
6	0.5	YE/GY	5216	I	—	Front Parking Left Mid Sensor	6	0.5	YE/GY	5216	II	—
7	0.5	WH/GY	5217	I	—	Front Parking Right Corner Sensor	7	0.5	WH/GY	5217	II	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	VT/GY	5218	I	—	Front Parking Right Mid Sensor	10	0.5	VT/GY	5218	II	—
11	0.5	BK/D-BU	5214	I	—	Front Parking Sensor Low Reference	11	0.5	BK/D-BU	5214	II	—
12 - 16	—	—	—	—	—	Not Occupied	12 - 16	—	—	—	—	—

X100 Front Bumper Harness to Forward Lamp Harness (Z75+AVF)





Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13603185

Service Connector: Service by Harness - See Part Catalog

Description: 40-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13603208

Service Connector: 13576551

Description: 40-Way M 1.5 DSQ, 2.8 ATS Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	19331731	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X100 Front Bumper Harness to Forward Lamp Harness (Z75+AVF)

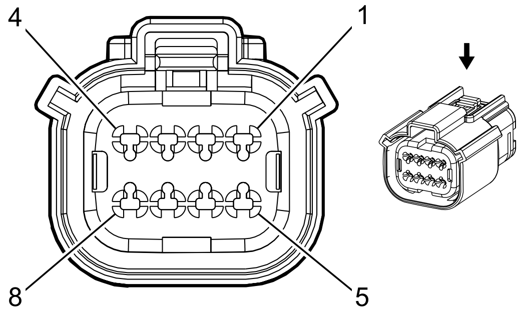
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	YE/GY	57	I	—	Left Cornering Lamp Control	2	0.5	YE/GY	57	II	—

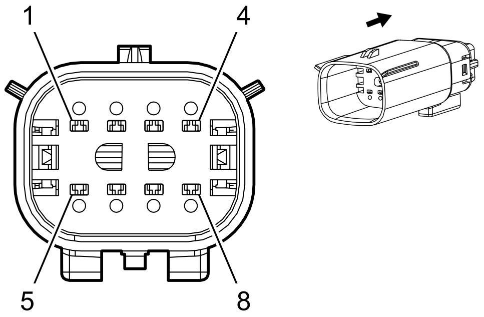
3	0.5	YE/WH	58	I	—	Right Cornering Lamp Control	3	0.5	YE/WH	58	II	—
4	0.5	YE/GN	5213	I	—	Front Parking Left/Right/Mid Sensor	4	0.5	YE/VT	5213	II	—
5	0.5	VT/WH	5215	I	—	Front Parking Left Corner Sensor	5	0.5	VT/WH	5215	II	—
6	0.5	YE/GY	5216	I	—	Front Parking Left Mid Sensor	6	0.5	YE/GY	5216	II	—
7	0.5	WH/GY	5217	I	—	Front Parking Right Corner Sensor	7	0.5	WH/GY	5217	II	—
8	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	8	0.75	GY/D-BU	7538	II	—
9	0.75	VT/GY	709	I	—	Left Park Lamp Control	9	0.5	VT/GY	709	II	—
10	0.5	VT/GY	5218	I	—	Front Parking Right Mid Sensor	10	0.5	VT/GY	5218	II	—
11	0.5	BK/D-BU	5214	I	—	Front Parking Sensor Low Reference	11	0.5	BK/D-BU	5214	II	—
12	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	12	0.5	D-BU/VT	3813	II	—
13	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	13	0.5	WH	3811	II	—

14	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	14	0.5	D-BU/VT	3813	II	—
15	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	15	0.5	WH	3811	II	—
16 - 17	—	—	—	—	—	Not Occupied	16 - 17	—	—	—	—	—
18	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	18	0.75	D-BU/BN	7539	II	—
19	0.5	GY/VT	3808	I	—	Front Object Sensor Control 2	19	0.5	GY/VT	3808	II	—
20	0.5	GY	3154	I	—	Left Front Supplemental Object Sensor Signal	20	0.5	GY	3154	II	—
21	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	21	0.75	D-BU/WH	1314	II	—
22	0.5	GN	3155	I	—	Right Front Supplemental Object Sensor Signal	22	0.5	GN	3155	II	—
23	0.75	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	23	0.75	GN/VT	1315	II	—
24	0.75	GY/BN	309	I	—	Right Park Lamp Control	24	0.5	GY/BN	309	II	—
25	0.75	BK	150	I	—	Ground	25	0.75	BK	150	II	—
26	0.75	BK	250	I	—	Ground	26	1	BK	250	III	—

27	0.35	BK/WH	2551	I	—	Signal Ground	27	0.5	BK/WH	2551	II	—
28	0.35	BK	3371	I	—	Video Low Reference 2	28	0.5	BK	3371	II	—
29	0.35	D-BU	3373	I	—	Auxiliary Video High Signal 2	29	0.5	D-BU	3373	II	—
30	0.35	GY	3372	I	—	Auxiliary Video Low Signal 2	30	0.5	GY	3372	II	—
31	0.35	WH/BN	6201	I	—	Camera Control	31	0.5	WH/BN	6201	II	—
32 - 33	—	—	—	—	—	Not Occupied	32 - 33	—	—	—	—	—
34	0.5	BK	9001	I	—	—	34	—	—	—	—	—
35	0.5	BK	9000	I	—	—	35	—	—	—	—	—
36 - 40	—	—	—	—	—	Not Occupied	36 - 40	—	—	—	—	—

X101 Front Fascia Harness to Left Multifunction Lamp Harness





Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13654393

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Left Multifunction Lamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

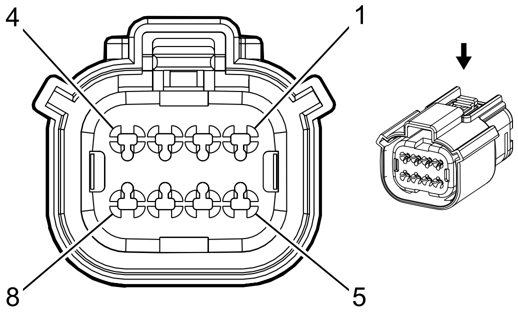
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

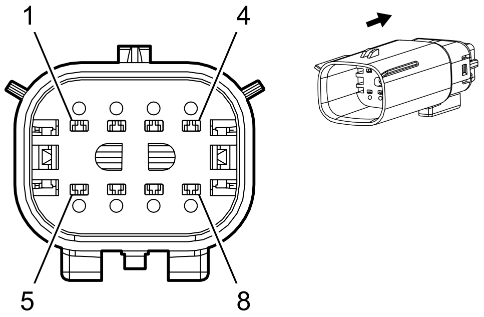
X101 Front Fascia Harness to Left Multifunction Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	150	I	—	Ground	1	0.75	BK	150	II	—
2	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	2	0.75	D-BU/WH	1314	II	—

3	0.75	VT/GY	709	I	—	Left Park Lamp Control	3	0.75	VT/GY	709	II	—
4	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	4	0.75	GY/D-BU	7538	II	—
5	0.5	BK	9001	I	—	—	5	0.5	BK	9001	II	—
6	0.5	YE/GY	57	I	—	Left Cornering Lamp Control	6	0.5	YE/GY	57	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X104 Front Fascia Harness to Right Multifunction Lamp Harness





Connector Part Information

Harness Type: Front Bumper

OEM Connector: 13654393

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Right Multifunction Lamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

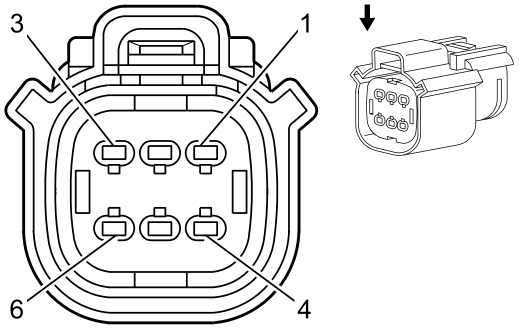
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

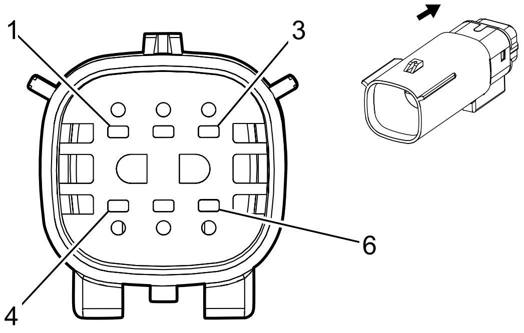
X104 Front Fascia Harness to Right Multifunction Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	250	I	—	Ground	1	0.75	BK	250	II	—
2	0.75	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	2	0.75	GN/VT	1315	II	—

3	0.75	GY/BN	309	I	—	Right Park Lamp Control	3	0.75	GY/BN	309	II	—
4	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	4	0.75	D-BU/BN	7539	II	—
5	0.5	BK	9000	I	—	—	5	0.5	BK	9000	II	—
6	0.5	YE/WH	58	I	—	Right Cornering Lamp Control	6	0.5	YE/WH	58	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X106 Aero Shutter Jumper Harness to Forward Lamp Harness





Connector Part Information

Harness Type: Aero Shutter Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 15457002

Service Connector: 13576414

Description: 6-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

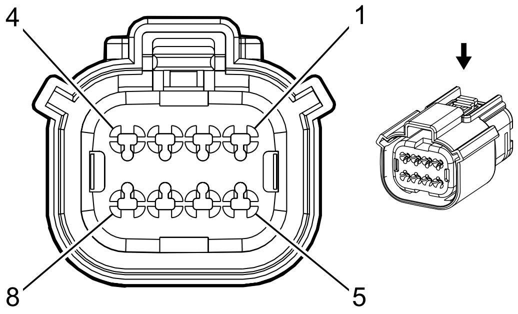
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

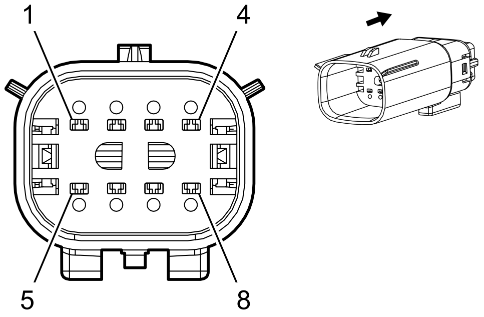
X106 Aero Shutter Jumper Harness to Forward Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	250	I	—	Ground	1	1	BK	250	II	—
2	0.5	VT/D-BU	5290	I	—	Powertrain Main Relay Fused Supply 1	2	0.5	VT/D-BU	5290	II	—

3	0.5	GN/VT	4621	I	—	Local Interconnect Network Serial Data Bus 21	3	0.5	GN/VT	4621	II	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	5	0.5	BK/D-BU	61	II	—
6	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	6	0.5	D-BU/GY	636	II	—

X110 Forward Lamp Harness to Left Headlamp Harness (X88)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13884361

Service Connector: 19301723

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

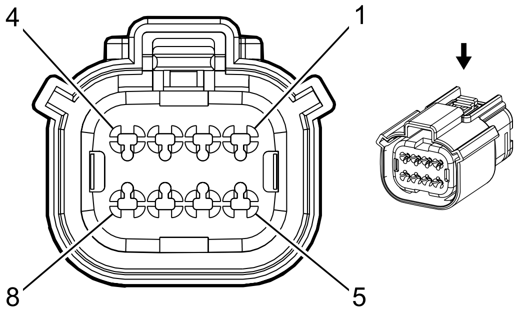
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

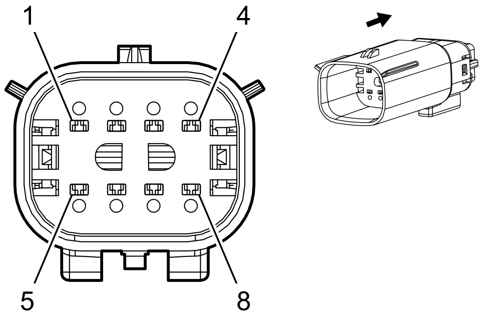
X110 Forward Lamp Harness to Left Headlamp Harness (X88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	1	BK	150	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—

3	0.75 0.5	WH WH	711 711	I I	6J7 -6J7	Left Headlamp High Beam Control Left Headlamp High Beam Control	3					
4	1	BK	150	I	—	Ground	4	1	BK	150	II	—
5	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	5	0.75	D-BU/WH	1314	II	—
6	0.5 0.75	VT/GY GY/D-BU	709 7538	I I	X88+Z88 Z75	Left Park Lamp Control Left Front DRL Control	6	0.5	VT/GY	709	II	—
7	0.5	VT/GY	709	I	—	Left Park Lamp Control	7	0.5	VT/GY	709	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X110 Forward Lamp Harness to Left Headlamp Harness (Z75)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13884361

Service Connector: 19301723

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

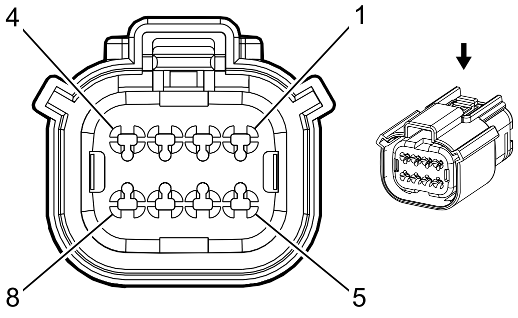
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

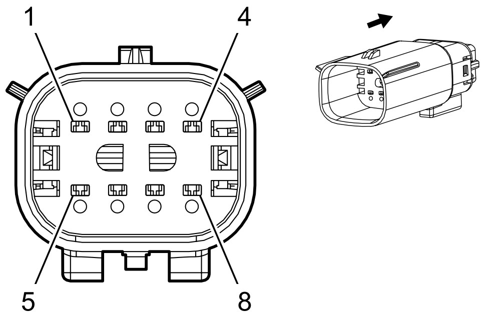
X110 Forward Lamp Harness to Left Headlamp Harness (Z75)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	1	BK	150	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—

3	0.5	WH	711	I	—	Left Headlamp High Beam Control	3	0.5	WH	711	II	—
4	1	BK	150	I	—	Ground	4	1	BK	150	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	6	0.75	GY/D-BU	7538	II	—
7	0.5	VT/GY	709	I	—	Left Park Lamp Control	7	0.5	VT/GY	709	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X110 Forward Lamp Harness to Left Headlamp Harness (Z88)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13654393

Service Connector: 13577527

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Left Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

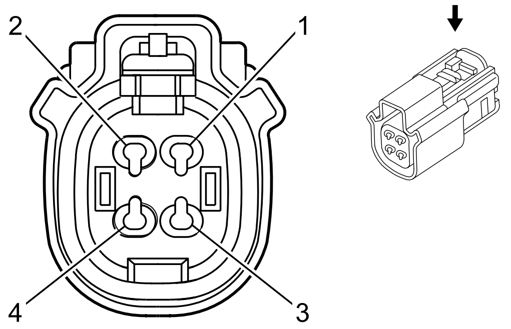
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

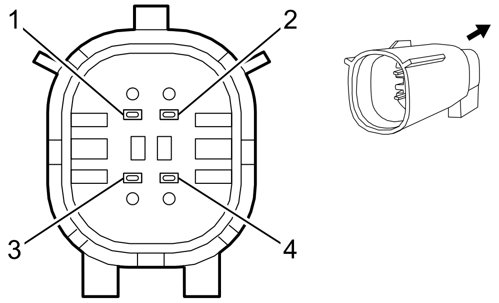
X110 Forward Lamp Harness to Left Headlamp Harness (Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	150	I	—	Ground	1	1	BK	150	II	—
2	0.75	YE	712	I	—	Left Headlamp Low Beam Control	2	0.75	YE	712	II	—

3	0.5	WH	711	I	—	Left Headlamp High Beam Control	3	0.5	WH	711	II	—
4	1	BK	150	I	—	Ground	4	1	BK	150	II	—
5	0.75	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	5	0.75	D-BU/WH	1314	II	—
6	0.75	GY/D-BU	7538	I	—	Left Front DRL Control	6	0.75	GY/D-BU	7538	II	—
7	0.5	VT/GY	709	I	—	Left Park Lamp Control	7	0.5	VT/GY	709	II	—
8	0.5	D-BU/VT	3204	I	—	Left Headlamp Bulb Outage Signal	8	0.5	D-BU/VT	3204	II	—

X111 Transfer Case Harness to Engine Harness





Connector Part Information

Harness Type: Transfer Case

OEM Connector: 13872556

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Engine

OEM Connector: 13586625

Service Connector: 19329823

Description: 4-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

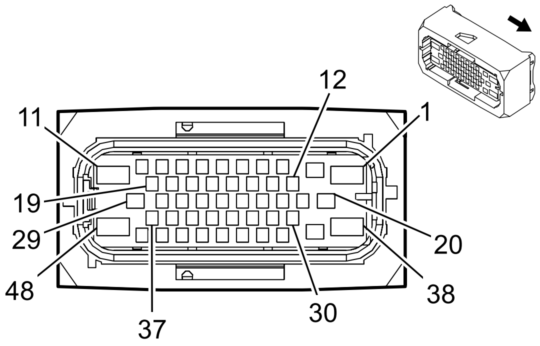
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

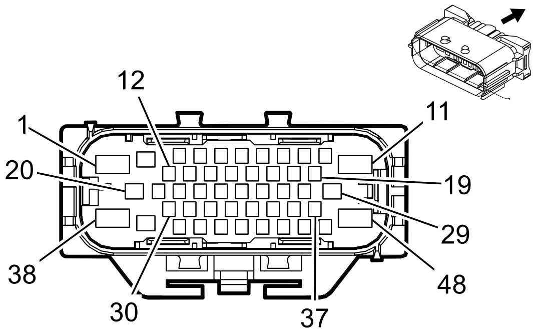
X111 Transfer Case Harness to Engine Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	YE/WH	1695	I	—	Four Wheel Drive Wheel Lock Indicator Control	1	0.5	YE/WH	1695	II	—
2	0.5	GY/BK	1570	I	—	Front Axle Actuator	2	0.5	GY/BK	1570	III	—

2	0.5					Control	2	0.5			
3	0.5	VT/BK	2139	I	—	Run/Crank Ignition 1 Voltage	3	0.5	VT/BK	2139	III	—
4	0.5	BK	550	I	—	Ground	4	1	BK	550	III	—

X115 Engine Harness to Body Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 15509587

Service Connector: 19119963

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (GY)

Connector Part Information

Harness Type: Body

OEM Connector: 15513437

Service Connector: 13586850

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13580829	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
II	13580830	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
IV	19119560	J-35616-40 (BU)	J-38125-556	1241408-1	Lear 28	B	G
V	19329757	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
VI	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IX	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
X	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X	[illegible]	[illegible]	[illegible]	Not Available	Not Available	Not Available	Not Available
XI	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X115 Engine Harness to Body Harness

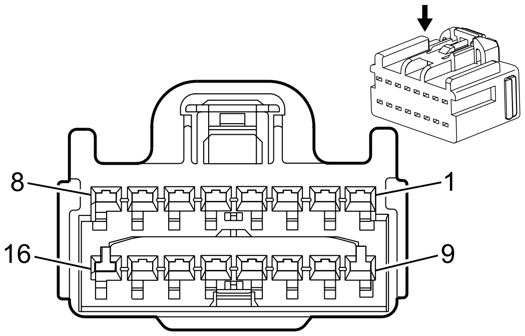
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	3	RD/GY	1342	IV	—	Battery Positive Voltage	1	4	RD/GY	1342	IX	—
2	0.75	D-BU/BN	7573	II	—	Electric Variable Displacement Supply	2	0.5	D-BU/BN	7573	VIII	—
3	0.5	BN/WH	419	III	—	Check Engine Indicator Control	3	0.35	BN/WH	419	X	—
4	0.5	WH/D-BU	6311	III	—	Cruise/ETC/TCC Brake Signal	4	0.35	WH/D-BU	6311	X	—
5	0.5	WH	2501	III	—	High Speed GMLAN Serial Data (-) 1	5	0.5	WH	2501	VI	—
6	0.5	D-BU	2500	III	—	High Speed GMLAN Serial Data (+) 1	6	0.5	D-BU	2500	VI	—
7	0.5	WH	5359	III	—	Brake Apply Sensor Control	7	0.5	WH	5359	VI	—
8	0.5	BK/BN	5360	III	—	Brake Apply Sensor Low Reference	8	0.5	BK/BN	5360	VI	—
9	0.5	D-BU/YE	5361	III	—	Brake Apply Sensor Signal	9	0.5	D-BU/YE	5361	VI	—
10	0.5	YE/WH	1161	V	—	Accelerator Pedal Position Signal 1	10	0.35	YE/WH	1161	XI	—

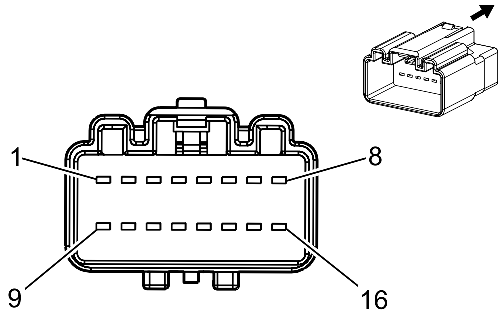
11	3	BK	550	IV	—	Ground	11	4	BK	550	IX	—
12	0.5	WH/GN	7479	III	—	Rotary Position Sensor Signal	12	0.5	WH/GN	7479	VI	—
13	0.5	YE/BK	7478	III	—	Rotary Position Sensor Low Reference	13	0.5	YE/BK	7478	VI	—
14	0.5	YE/WH	1695	III	—	Four Wheel Drive Wheel Lock Indicator Control	14	0.5	YE/WH	1695	VI	—
15	0.5	GY/BK	1570	III	—	Front Axle Actuator Control	15	0.5	GY/BK	1570	VI	—
16	0.5	VT/YE	5985	III	—	Accessory Wakeup Serial Data	16	0.35	VT/YE	5985	X	—
17	0.5	WH/D-BU	5986	III	—	Serial Data Communication Enable	17	0.5	WH/D-BU	5986	VI	—
18	0.5	WH/RD	1164	V	—	Accelerator Pedal Position 5V Reference 1	18	0.35	WH/RD	1164	XI	—
19	0.5	BK/D-BU	1271	V	—	Accelerator Pedal Position Low Reference 1	19	0.35	BK/D-BU	1271	XI	—
20	0.75	D-BU/YE	7574	II	—	Electric Variable Displacement Control	20	0.5	D-BU/YE	7574	VIII	—
21	0.5	WH/RD	7477	III	—	Rotary Position Sensor 5V Reference	21	0.5	WH/RD	7477	VI	—

22	0.5	D-BU/GY	7473	III	—	Incremental Encoder Impulse Signal	22	0.35	D-BU/GY	7473	X	—
23	0.5	VT	7476	III	—	Incremental Encoder Sensor Low Reference	23	0.35	VT	7476	X	—
24	0.5	YE	5530	III	—	Hood Open Switch Signal	24	0.5	YE	5530	VI	—
25	0.5	BN/RD	1274	V	—	Accelerator Pedal Position 5V Reference 2	25	0.35	BN/RD	1274	XI	—
26	0.5	GN/WH	1162	V	—	Accelerator Pedal Position Signal 2	26	0.35	GN/WH	1162	XI	—
27	0.5	BK/VT	1272	V	—	Accelerator Pedal Position Low Reference 2	27	0.35	BK/VT	1272	XI	—
28	0.5	VT/D-BU	6091	III	—	Crankshaft Position Sensor Replicated Signal	28	0.35	VT/D-BU	6091	X	—
29	2.5	YE/BN	1569	I	—	Transfer Case Lock Solenoid Control	29	2.5	YE/BN	1569	VII	—
30	0.5	WH/GN	7475	III	—	Incremental Encoder Sensor 8V Reference	30	0.35	WH/GN	7475	X	—
31	0.5	YE	7474	III	—	Incremental Encoder Direction Signal	31	0.35	YE	7474	X	—
32	0.5	BK/VT	5077	III	—	Current Sensor Low Reference	32	0.35	BK/VT	5077	X	—

33	0.5	WH/YE	5075	III	—	Current Sensor Signal	33	0.35	WH/YE	5075	X	—
34	0.5	D-BU/VT	5076	III	—	Current Sensor Control	34	0.35	D-BU/VT	5076	X	—
35	0.5	D-BU/YE	6105	III	—	High Speed GMLAN Serial Data (+) 2	35	0.5	D-BU/YE	6105	VI	—
36	0.5	WH	6106	III	—	High Speed GMLAN Serial Data (-) 2	36	0.5	WH	6106	VI	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	3	YE/VT	1553	IV	—	Transfer Case Motor Counter Clockwise Control	38	4	YE/VT	1553	IX	—
39 - 41	—	—	—	—	—	Not Occupied	39 - 41	—	—	—	—	—
42	0.5	VT/BN	300	III	—	Run Ignition 3 Voltage	42	0.5	VT/BN	300	VI	—
43 - 47	—	—	—	—	—	Not Occupied	43 - 47	—	—	—	—	—
48	3	OG	1552	IV	—	Transfer Case Motor Clockwise Control	48	4	YE/GY	1552	IX	—

X119 Body Harness to Brake Clutch Jumper Harness





Connector Part Information

Harness Type: Body

OEM Connector: 10847013

Service Connector: 89047090

Description: 16-Way F 1.5 Kaizen Series (GN)

Connector Part Information

Harness Type: Auxiliary Fuse Block

OEM Connector: 13507433

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way M 1.5 Kaizen Series (GN)

Terminal Part Information

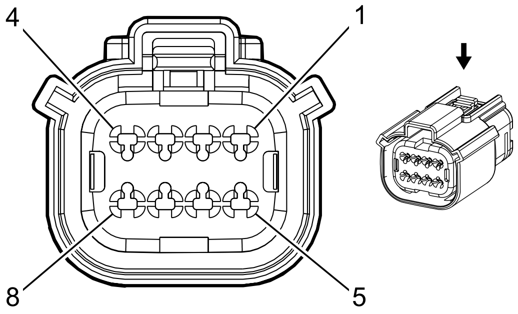
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

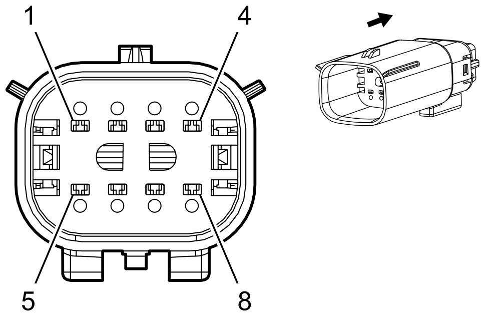
X119 Body Harness to Brake Clutch Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BK/D-BU	1271	I	—	Accelerator Pedal Position Low Reference 1	1	0.35	BK/D-BU	1271	III	—
2	0.35	YE/WH	1161	I	—	Accelerator Pedal	2	0.35	YE/WH	1161	III	—

2	0.35					Position Signal 1	2	0.35				
3	0.35	WH/RD	1164	I	—	Accelerator Pedal Position 5V Reference 1	3	0.35	WH/RD	1164	III	—
4	0.35	BK/VT	1272	I	—	Accelerator Pedal Position Low Reference 2	4	0.35	BK/VT	1272	III	—
5	0.35	GN/WH	1162	I	—	Accelerator Pedal Position Signal 2	5	0.35	GN/WH	1162	III	—
6	0.35	BN/RD	1274	I	—	Accelerator Pedal Position 5V Reference 2	6	0.35	BN/RD	1274	III	—
7	0.5	WH	5359	II	—	Brake Apply Sensor Control	7	0.5	WH	5359	III	—
8	0.5	BK/BN	5360	II	—	Brake Apply Sensor Low Reference	8	0.5	BK/BN	5360	III	—
9	0.5	D-BU/YE	5361	II	—	Brake Apply Sensor Signal	9	0.5	D-BU/YE	5361	III	—
10	0.5	YE/BK	7478	II	—	Rotary Position Sensor Low Reference	10	0.5	YE/BK	7478	III	—
11	0.5	WH/RD	7477	II	—	Rotary Position Sensor 5V Reference	11	0.5	WH/RD	7477	III	—
12	0.5	WH/GN	7479	II	—	Rotary Position Sensor Signal	12	0.5	WH/GN	7479	III	—
13 - 16	—	—	—	—	—	Not Occupied	13 - 16	—	—	—	—	—

X120 Forward Lamp Harness to Right Headlamp Harness (X88)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13884361

Service Connector: 19301723

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

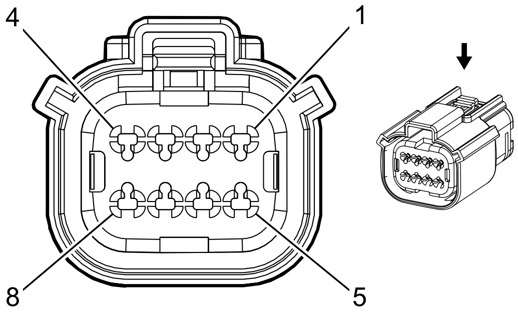
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

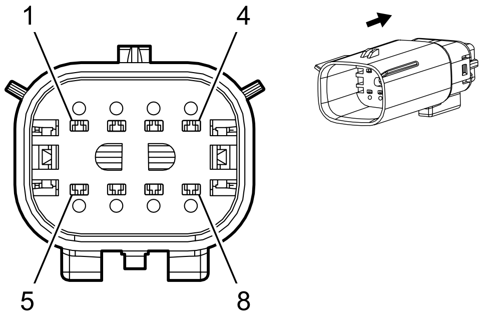
X120 Forward Lamp Harness to Right Headlamp Harness (X88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	250	I	—	Ground	1	1	BK	250	II	—
2	0.75	YE	312	I	—	Right Headlamp Low Beam Control	2	0.75	YE	312	II	—

3	0.75 0.5	WH WH	311 311	I I	X88/Z88 X88+Z88	Right Headlamp High Beam Control Right Headlamp High Beam Control	3					
4	1	BK	250	I	—	Ground	4	1	BK	250	II	—
5	0.75	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	5	0.75	GN/VT	1315	II	—
6	0.75 0.5	D-BU/BN GY/BN	7539 309	I I	X88/Z88 X88+Z88	Right Front DRL Control Right Park Lamp Control	6	0.5	GY/BN	309	II	—
7	0.5	GY/BN	309	I	—	Right Park Lamp Control	7	0.5	GY/BN	309	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X120 Forward Lamp Harness to Right Headlamp Harness (Z75)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13884361

Service Connector: 19301723

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

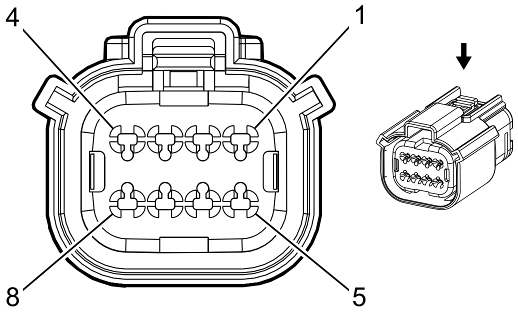
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

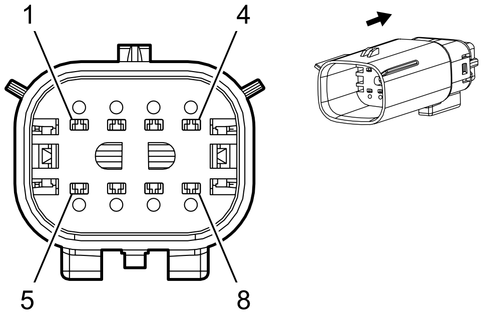
X120 Forward Lamp Harness to Right Headlamp Harness (Z75)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	250	I	—	Ground	1	1	BK	250	II	—
2	0.75	YE	312	I	—	Right Headlamp Low Beam Control	2	0.75	YE	312	II	—

3	0.5	WH	311	I	—	Right Headlamp High Beam Control	3	0.5	WH	311	II	—
4	1	BK	250	I	—	Ground	4	1	BK	250	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	6	0.75	D-BU/BN	7539	II	—
7	0.5	GY/BN	309	I	—	Right Park Lamp Control	7	0.5	GY/BN	309	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X120 Forward Lamp Harness to Right Headlamp Harness (Z88)





Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13654393

Service Connector: 13577527

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Right Headlamp

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

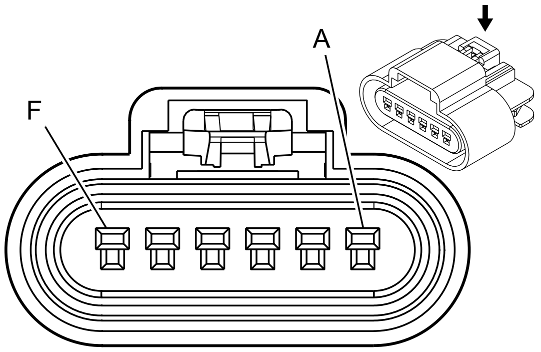
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

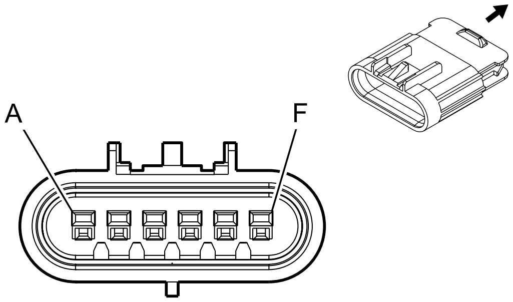
X120 Forward Lamp Harness to Right Headlamp Harness (Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BK	250	I	—	Ground	1	1	BK	250	II	—
2	0.75	YE	312	I	—	Right Headlamp Low Beam Control	2	0.75	YE	312	II	—

3	0.5	WH	311	I	—	Right Headlamp High Beam Control	3	0.5	WH	311	II	—
4	1	BK	250	I	—	Ground	4	1	BK	250	II	—
5	0.75	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	5	0.75	GN/VT	1315	II	—
6	0.75	D-BU/BN	7539	I	—	Right Front DRL Control	6	0.75	D-BU/BN	7539	II	—
7	0.5	GY/BN	309	I	—	Right Park Lamp Control	7	0.5	GY/BN	309	II	—
8	0.5	WH/D-BU	3203	I	—	Right Headlamp Bulb Outage Signal	8	0.5	WH/D-BU	3203	II	—

X122 Forward Lamp Harness to Forward Lamp Harness





Connector Part Information

- Harness Type: Forward Lamp
- OEM Connector: 15326829
- Service Connector: 13584094
- Description: 6-Way F 150 GT Series, Sealed (BK)

Connector Part Information

- Harness Type: Forward Lamp
- OEM Connector: 15326833
- Service Connector: 15326833
- Description: 6-Way M 150 GT Series, Sealed (BK)

Terminal Part Information

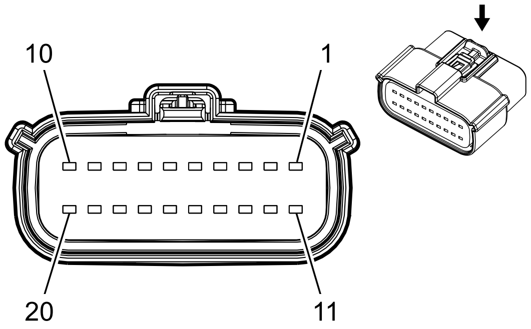
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

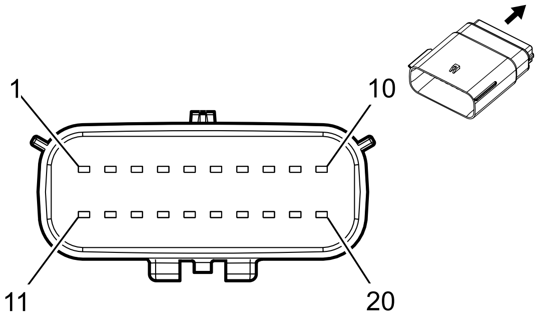
X122 Forward Lamp Harness to Forward Lamp Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	1	BK	250	I	—	Ground	A	—	—	—	—	—
B	0.75	WH	711	I	—	Left Headlamp High Beam Control	B	0.75	WH	711	II	—

C	0.75	RD/D-BU	3940	I	—	Battery Positive Voltage	C	—	—	—	—	—
D	0.75	WH	311	I	—	Right Headlamp High Beam Control	D	0.75	WH	311	II	—
E	0.75	GN	6820	I	—	Exterior Lamp Flasher Signal	E	—	—	—	—	—
F	0.75	D-BU/GN	6841	I	—	Rear Lamp Flasher Signal	F	—	—	—	—	—

X125 Engine Harness to Chassis Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 13650143

Service Connector: 19300557

Description: 20-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Chassis

OEM Connector: 33181840

Service Connector: 19351705

Description: 20-Way M 1.5 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

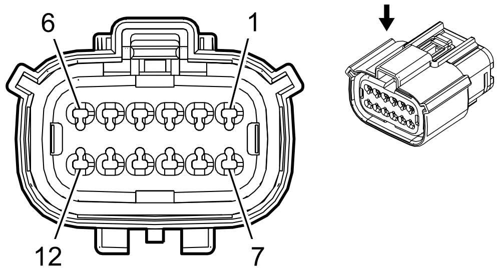
X125 Engine Harness to Chassis Harness

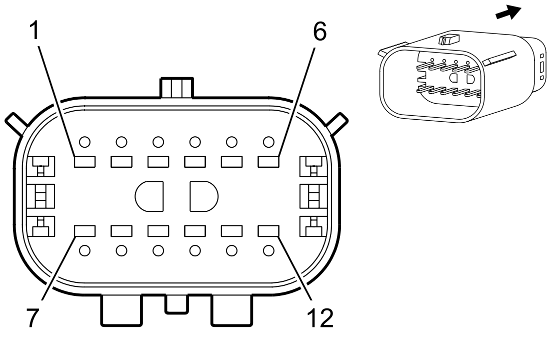
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/D-BU	3120	II	—	Heated Oxygen Sensor High Signal Bank 1 Sensor 2	1	0.5	VT	3120	III	—
2	0.5	WH/YE	3121	I	—	Heated Oxygen Sensor	2	0.5	WH/YE	3121	III	—

2	0.5					Low Signal Bank 1 Sensor 2	2	0.5				
3	0.5	GY/WH	3122	I	—	Heated Oxygen Sensor Heater Low Control Bank 1 Sensor 2	3	0.5	GY/WH	3122	III	—
4	0.5	VT/D-BU	5294	I	—	Powertrain Main Relay Fused Supply 5	4	0.5	VT/D-BU	5294	III	—
5	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	5	0.5	D-BU/YE	6105	III	—
6	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	6	0.5	WH	6106	III	—
7	0.5	WH	1310	I	—	EVAP Canister Vent Solenoid Control	7	0.5	WH	1310	III	—
8	0.5 0.5	D-BU/WH D-BU/WH	1937 7446	I I	L96+N2N LV3/LV1/L83/L86/L8B-L96	Secondary Fuel Level Sensor Signal Fuel Line Pressure Sensor Signal	8	0.5 0.5	D-BU/WH D-BU/WH	1937 7446	III III	L96+N2N LV3/LV1/L83/L86/L8B-L96
9	0.5	BK/YE	7447	I	—	Fuel Line Pressure Sensor Low Reference	9	0.5	BK/YE	7447	III	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	D-BU/VT	1589	I	—	Primary Fuel Level Sensor Signal	11	0.5	D-BU/VT	1589	III	—
12	0.5	BK/GN	6281	I	—	Fuel Level Sensor Low Reference	12	0.5	BK/GN	6281	III	—

13	0.5	D-BU/BK	7493	I	—	High Speed GMLAN Serial Data (+)3	13	0.5	D-BU/BK	7493	III	—
14	0.5	WH	7494	I	—	High Speed GMLAN Serial Data (-)3	14	0.5	WH	7494	III	—
15	0.5	D-BU/WH	890	I	—	Fuel Tank Pressure Sensor Signal	15	0.5	D-BU/WH	890	III	—
16	0.5	YE/RD	2709	I	—	Fuel Tank Pressure Sensor 5V Reference	16	0.5	YE/RD	2709	III	—
17	0.5	WH	1579	I	—	Fuel Temperature/Composition Signal	17	0.5	WH	1579	III	—
18	0.5	BN/RD	7445	I	—	Fuel Line Pressure Sensor 5V Reference	18	0.5	BN/RD	7445	III	—
19 - 20	—	—	—	—	—	Not Occupied	19 - 20	—	—	—	—	—

X139 Engine Harness to Forward Lamp Harness (L83/L86)





Connector Part Information

Harness Type: Engine

OEM Connector: 15508066

Service Connector: 19329931

Description: 12-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 33180263

Service Connector: 19354161

Description: 12-Way M 150 MX Series, Sealed (YE)

Terminal Part Information

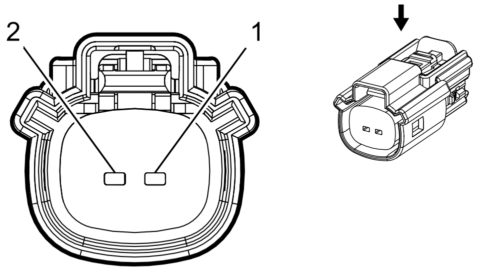
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

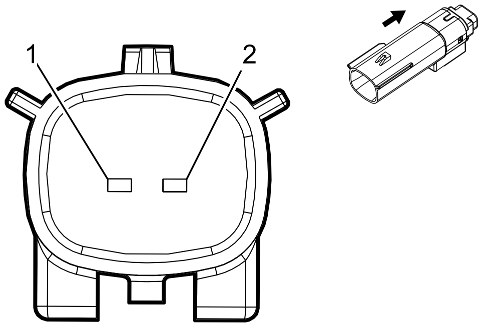
X139 Engine Harness to Forward Lamp Harness (L83/L86)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	BN/YE	473	I	—	High Speed Cooling Fan Relay Control	2	0.5	BN/YE	473	II	—
3	0.5	BK/D-BU	61	I	—	Outside Ambient	3	0.5	BK/D-BU	61	II	—

3	0.5					Temperature Sensor Low Reference	3	0.5			
4	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	4	0.5	D-BU/GY	636	II	—
5	0.5	WH/D-BU	5986	I	—	Serial Data Communication Enable	5	0.5	WH/D-BU	5986	II	—
6	0.75	VT/D-BU	5290	I	—	Powertrain Main Relay Fused Supply 1	6	0.5	VT/D-BU	5290	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	8	0.5	WH	6106	II	—
9	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	9	0.5	D-BU	6105	II	—
10	—	—	—	—	—	High Speed GMLAN Serial Data (+) 1	10	0.5	D-BU	2500	II	—
11	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	11	0.5	WH	2501	II	—
12	0.5	GN/VT	4621	I	—	Local Interconnect Network Serial Data Bus 21	12	0.5	GN/VT	4621	II	—

X139 Engine Harness to Forward Lamp Harness (L96)





Connector Part Information

Harness Type: Engine

OEM Connector: 13782480

Service Connector: 13577534

Description: 2-Way F 150 MX Series, Sealed (BK)

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13883040

Service Connector: 19119346

Description: 2-Way M 1.5 MX Series, Sealed (BK)

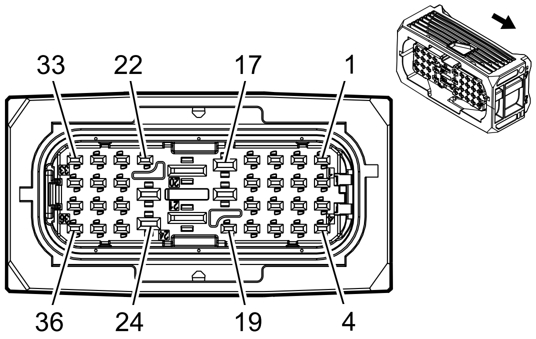
Terminal Part Information

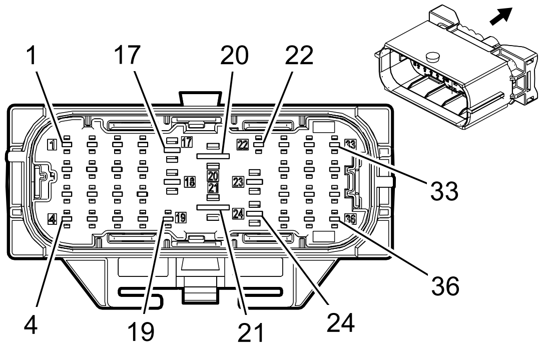
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X139 Engine Harness to Forward Lamp Harness (L96)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN/YE	473	I	—	High Speed Cooling Fan Relay Control	1	0.75	BN/YE	473	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—

X150 Body Harness to Forward Lamp Harness (L83/L86)





Connector Part Information

Harness Type: Body

OEM Connector: 13929980

Service Connector: 19333092

Description: 36-Way F 1.5, 2.8 CTS, 6.3 MCP Series (BK)

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13930004

Service Connector: 19330685

Description: 36-Way M 1.5, 2.8, 5.8 Series, Sealed

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13582180	J-35616-14 (GN)	J-38125-560	1241374-1	Lear 17	E	2
II	19119381	J-35616-14 (GN)	J-38125-215A	Not Available	Not Available	Not Available	Not Available
III	19119772	J-35616-35 (VT)	J-38125-557	1241388-1	Lear 17	E	C
IV	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available

X150 Body Harness to Forward Lamp Harness (L83/L86)

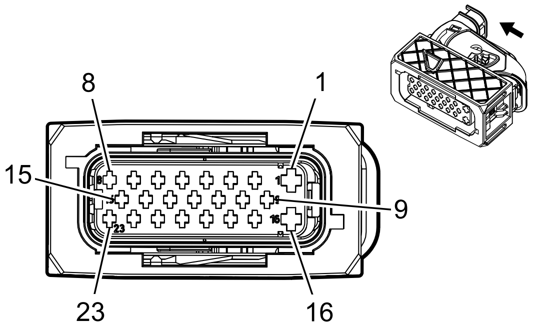
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	WH/BN	6201	II	—	Camera Control	1	0.5	WH/BN	6201	IV	—

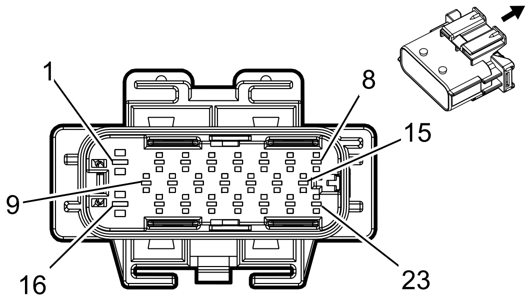
2	0.35	BK/WH	2551	II	—	Signal Ground	2	0.5	BK/WH	2551	IV	—
3	0.35	D-BU	3373	II	—	Auxiliary Video High Signal 2	3	0.5	D-BU	3373	IV	—
4	0.35	GY	3372	II	—	Auxiliary Video Low Signal 2	4	0.5	GY	3372	IV	—
5	0.35	OG/YE	354	II	—	Left Front Discriminating Sensor Signal	5	0.5	OG/YE	354	IV	—
6	0.35	BK/OG	5045	II	—	Left Front Discriminating Sensor Low Reference	6	0.5	BK/OG	5045	IV	—
7	0.35	BK	3371	II	—	Video Low Reference 2	7	0.5	BK	3371	IV	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	OG/GN	1409	II	—	Right Front Discriminating Sensor Signal	9	0.5	OG/GN	1409	IV	—
10	0.35	BK/OG	5600	II	—	Right Front Discriminating Sensor Low Reference	10	0.5	BK/OG	5600	IV	—
11	0.5	YE	5530	I	—	Hood Open Switch Signal	11	0.5	YE	5530	IV	—
12	0.5	BN/GN	109	II	—	Hood Ajar Switch Signal	12	0.5	BN/GN	109	IV	—
		BK/D-BU	61	II	—	Outside Ambient			—	—	—	—

13	0.35					Temperature Sensor Low Reference	13	—				
14	0.35	D-BU/GY	636	II	—	Outside Ambient Air Temperature Sensor Signal	14	—	—	—	—	—
15	0.35	VT	185	II	—	Low Washer Fluid Indicator Control	15	0.5	VT	185	IV	—
16	0.5	WH	3811	II	—	High Speed GMLAN Serial Data (-) 4	16	0.5	WH	3811	IV	—
17	0.75	D-BU/GN	6841	III	—	Rear Lamp Flasher Signal	17	0.75	D-BU/GN	6841	V	—
18	0.75	GN	6820	III	—	Exterior Lamp Flasher Signal	18	0.75	GN	6820	V	—
19	0.5	D-BU/VT	3813	II	—	High Speed GMLAN Serial Data (+) 4	19	0.5	D-BU/VT	3813	IV	—
20 - 21	—	—	—	—	—	Not Occupied	20 - 21	—	—	—	—	—
22	0.35	GY/VT	3808	II	—	Front Object Sensor Control 2	22	0.5	GY/VT	3808	IV	—
23	0.75	RD/GN	3140	III	—	Battery Positive Voltage	23	0.5	RD/GN	3140	V	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.5	GY	3154	I	—	Left Front Supplemental Object Sensor Signal	25	0.5	GY	3154	IV	—
26	0.5	BK/D-BU	5214	II	—	Front Parking Sensor Low Reference	26	0.5	BK/D-BU	5214	IV	—

27	0.5	YE/VT	5213	II	—	Front Parking Left/Right/Mid Sensor	27	0.5	YE/VT	5213	IV	—
28	0.5	GN	3155	I	—	Right Front Supplemental Object Sensor Signal	28	0.5	GN	3155	IV	—
29	0.5	YE/GY	5216	II	—	Front Parking Left Mid Sensor	29	0.5	YE/GY	5216	IV	—
30	0.5	WH/GY	5217	II	—	Front Parking Right Corner Sensor	30	0.5	WH/GY	5217	IV	—
31	0.5	VT/GY	5218	II	—	Front Parking Right Mid Sensor	31	0.5	VT/GY	5218	IV	—
32	0.5	VT/WH	5215	II	—	Front Parking Left Corner Sensor	32	0.5	VT/WH	5215	IV	—
33 - 36	—	—	—	—	—	Not Occupied	33 - 36	—	—	—	—	—

X150 Body Harness to Forward Lamp Harness (L96)





Connector Part Information

Harness Type: Body

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 23-Way F

Connector Part Information

Harness Type: Forward Lamp

OEM Connector: 13750011

Service Connector: 19301797

Description: 23-Way M 1.5, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available

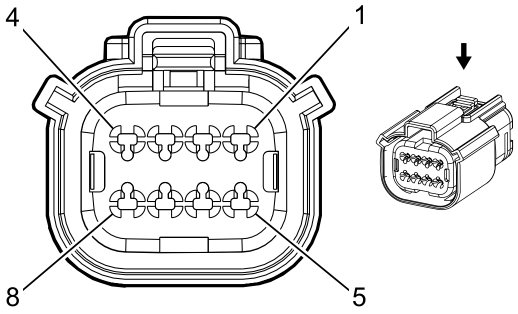
X150 Body Harness to Forward Lamp Harness (L96)

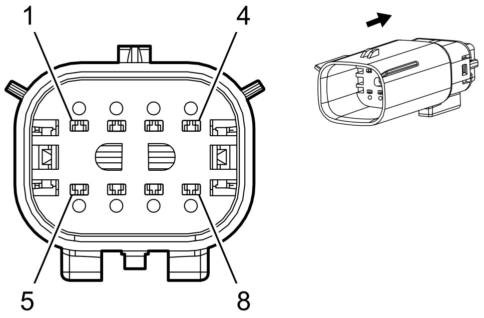
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK/D-BU	61	I	—	Outside Ambient Temperature Sensor Low Reference	1	0.5	BK/D-BU	61	III	—
2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—

4	0.5	YE/GY	5216	I	—	Front Parking Left Mid Sensor	4	0.5	YE/GY	5216	II	—
5	0.5	WH/GY	5217	I	—	Front Parking Right Corner Sensor	5	0.5	WH/GY	5217	II	—
6	0.5	VT/GY	5218	I	—	Front Parking Right Mid Sensor	6	0.5	VT/GY	5218	II	—
7	0.5	BK/D-BU	5214	I	—	Front Parking Sensor Low Reference	7	0.5	BK/D-BU	5214	II	—
8	0.5	VT/WH	5215	I	—	Front Parking Left Corner Sensor	8	0.5	VT/WH	5215	II	—
9 - 10	—	—	—	—	—	Not Occupied	9 - 10	—	—	—	—	—
11	0.5	OG	1409	I	—	Right Front Discriminating Sensor Signal	11	0.5	OG/GN	1409	II	—
12	0.5	BK/OG	5600	I	—	Right Front Discriminating Sensor Low Reference	12	0.5	BK/OG	5600	II	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	VT	185	I	—	Low Washer Fluid Indicator Control	14	0.5	VT	185	II	—
15	0.5	YE/VT	5213	I	—	Front Parking Left/Right/Mid Sensor	15	0.5	YE/VT	5213	II	—
16	0.5	D-BU/GY	636	I	—	Outside Ambient Air Temperature Sensor Signal	16	0.5	D-BU/GY	636	III	—
17 - 19	—	—	—	—	—	Not Occupied	17 - 19	—	—	—	—	—

20	0.5	OG/YE	354	I	—	Left Front Discriminating Sensor Signal	20	0.5	OG/YE	354	II	—
21	0.5	BK/OG	5045	I	—	Left Front Discriminating Sensor Low Reference	21	0.5	BK/OG	5045	II	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.5	BN	109	I	—	Hood Ajar Switch Signal	23	0.5	BN/GN	109	II	—

X154 Engine Harness to Camshaft Jumper Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 13884361

Service Connector: 19301723

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Camshaft Position Sensor Jumper

OEM Connector: 13790317

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

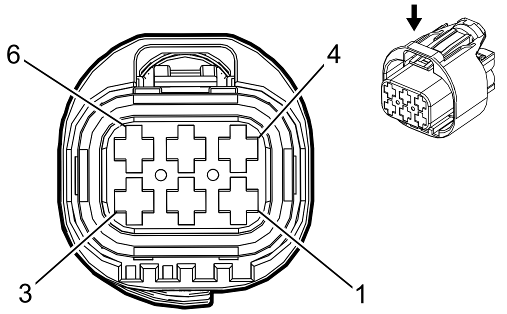
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

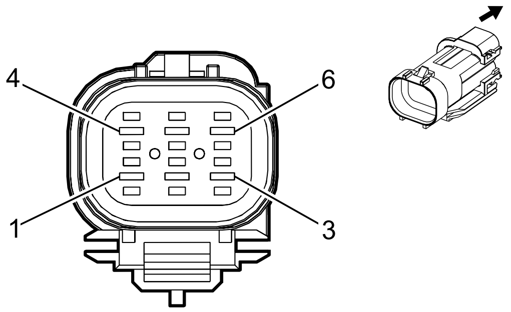
X154 Engine Harness to Camshaft Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/D-BU	5300	I	—	Camshaft Position Intake Sensor Control 1	1	0.5	GY/D-BU	5300	II	—
2	0.5	BK/GN	5301	I	—	Camshaft Position Intake Sensor Low Reference 1	2	0.5	BK/GN	5301	II	—

3	0.5	YE/VT	5275	I	—	Camshaft Position Intake Sensor 1	3	0.5	YE/VT	5275	II	—
4	0.5	D-BU	179	I	—	Oil Pump Command Signal	4	0.5	D-BU	179	II	—
5	0.5	VT/BN	5284	I	—	Camshaft Phaser Intake Solenoid 1	5	0.5	VT/BN	5284	II	—
6	0.5	BK/BN	6753	I	—	Cam Phaser W Low Reference	6	0.5	BK/BN	6753	II	—
7	0.75	VT/D-BU	5293	I	—	Powertrain Main Relay Fused Supply 4	7	0.5	VT/D-BU	5293	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X158 Battery Harness to Engine Harness





Connector Part Information

Harness Type: Battery

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Engine

OEM Connector: 13893482

Service Connector: 19329921

Description: 6-Way M 2.8 Series, Sealed (BK)

Terminal Part Information

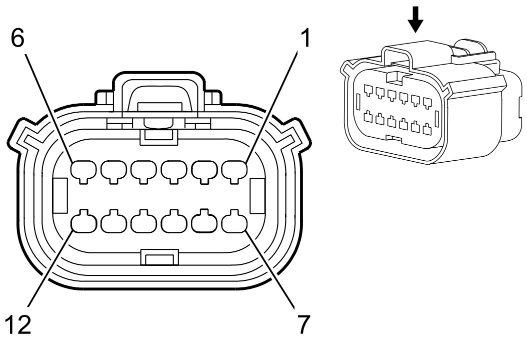
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

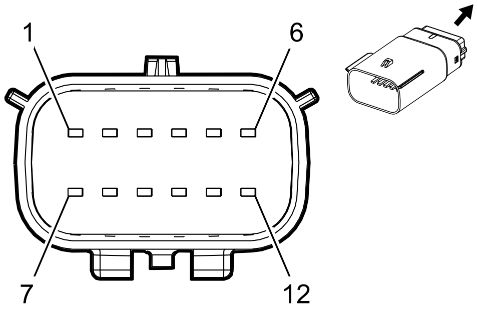
X158 Battery Harness to Engine Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT/BN	300	I	—	Run Ignition 3 Voltage	1	0.5	VT/BN	300	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.5	RD/WH	3440	I	—	Battery Positive Voltage	3	0.5	RD/WH	3440	II	—

3	0.5						3	0.5			
4	1	BK	550	I	—	Ground	4	1	BK	550	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	—	—	—	—	—	Battery Positive Voltage	6	2.5	RD/GN	742	II	—

X160 Engine Harness to Odd Fuel Injector Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 13653762

Service Connector: 13503528

Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Odd Fuel Injector

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M

Terminal Part Information

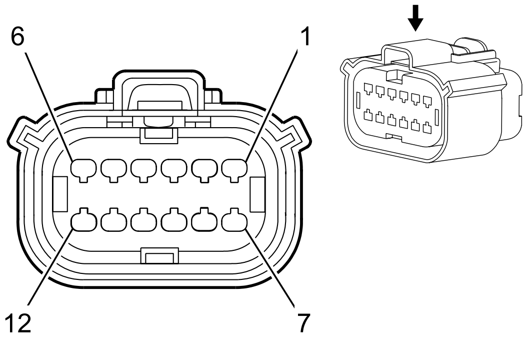
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

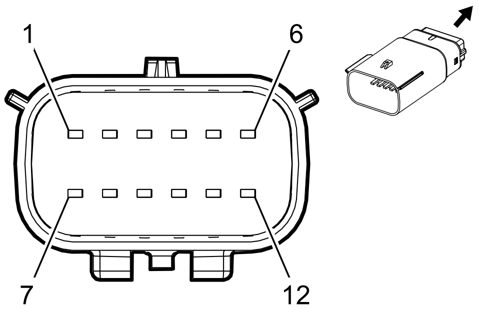
X160 Engine Harness to Odd Fuel Injector Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN/WH	4901	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1	1	0.75	BN/WH	4901	II	—
2	0.75	GN/BK	4903	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3	2	0.75	GN/BK	4903	II	—

3	0.75	GN/WH	4905	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5	3	0.75	GN/WH	4905	II	—
4	0.75	WH/YE	4907	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7	4	0.75	WH/YE	4907	II	—
5	0.75	BN	4801	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 1	5	0.75	BN	4801	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.75	GN	4803	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 3	7	0.75	GN	4803	II	—
8	0.75	WH/GN	4805	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 5	8	0.75	WH	4805	II	—
9	0.75	YE/GY	4807	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 7	9	0.75	YE/GY	4807	II	—
10	0.5	BN/RD	2917	I	—	Fuel Rail Pressure Sensor 5V Reference	10	0.5	BN/RD	2917	II	—
11	0.5	D-BU/WH	2918	I	—	Fuel Rail Pressure Sensor Signal	11	0.5	D-BU/WH	2918	II	—
12	0.5	BK/GN	2919	I	—	Fuel Rail Pressure Sensor Low Reference	12	0.5	BK	2919	II	—

X161 Engine Harness to Even Fuel Injector Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 13922706

Service Connector: 13503528

Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Even Fuel Injector

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M

Terminal Part Information

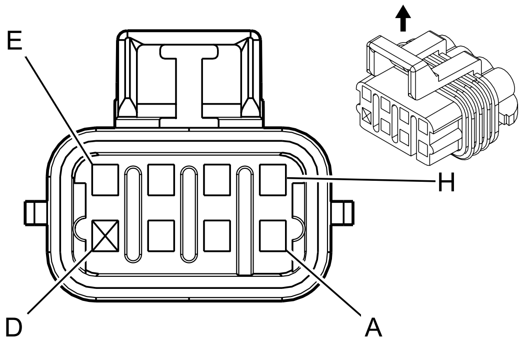
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578813	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

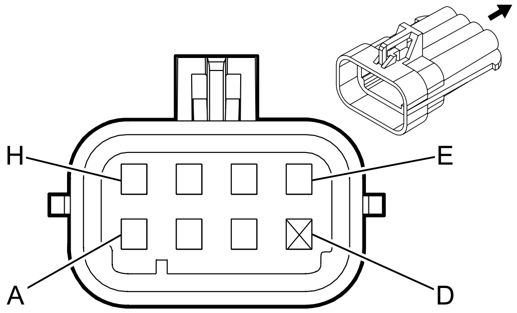
X161 Engine Harness to Even Fuel Injector Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN/GN	4902	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2	1	0.75	BN	4902	II	—
2	0.75	D-BU/WH	4904	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4	2	0.75	D-BU/WH	4904	II	—

3	0.75	VT	4906	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6	3	0.75	VT	4906	II	—
4	0.75	WH/GN	4908	I	—	Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8	4	0.75	WH	4908	II	—
5	0.75	D-BU	4802	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 2	5	0.75	D-BU	4802	II	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	0.75	GY/D-BU	4804	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 4	8	0.75	GY/D-BU	4804	II	—
9	0.75	GN/VT	4806	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 6	9	0.75	GN/VT	4806	II	—
10	0.75	GY	4808	I	—	Direct Fuel Injector (DFI) High Voltage Control Cylinder 8	10	0.75	GY	4808	II	—
11	0.75	VT/BK	7300	I	—	High Pressure Fuel Pump Actuator Low - Control	11	0.75	VT/BK	7300	II	—
12	0.75	YE	7301	I	—	High Pressure Fuel Pump Actuator High - Control	12	0.75	YE	7301	II	—

X170 Engine Harness to Ignition Coil (Odd) Harness (L96)





Connector Part Information

Harness Type: Engine

OEM Connector: 12047938

Service Connector: 13580883

Description: 8-Way F 150 Metri-Pack Series, Sealed (L-GY)

Connector Part Information

Harness Type: Ignition Coil

OEM Connector: 15496016

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 150 Metri-Pack Series (GY)

Terminal Part Information

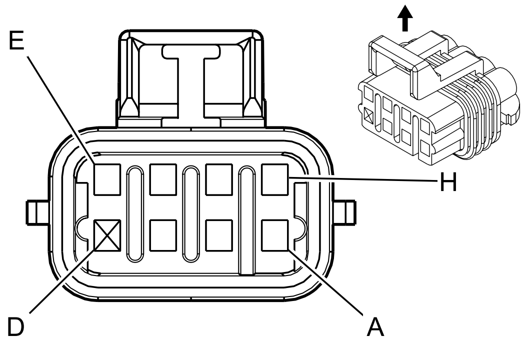
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

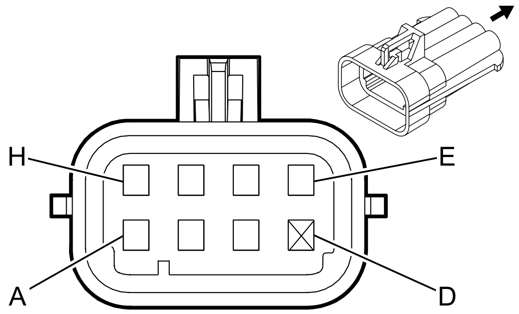
X170 Engine Harness to Ignition Coil (Odd) Harness (L96)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	—	—	—	—	—	Signal Ground	A	0.8	BK	151	II	—
B	0.5	GN/GY	2127	I	—	Ignition Control 7	B	0.5	RD	2127	II	—

C	0.5	D-BU/GY	2125	I	—	Ignition Control 5	C	0.5	GN	2125	II	—
E	0.5	BK/D-BU	2129	I	—	Ignition Control Low Reference Bank 1	E	0.5	BN	2129	II	—
F	0.5	GN/D-BU	2123	I	—	Ignition Control 3	F	0.5	BU	2123	II	—
G	0.5	D-BU/VT	2121	I	—	Ignition Control 1	G	0.5	VT	2121	II	—
H	0.75	VT/D-BU	5291	I	—	Powertrain Main Relay Fused Supply 2	H	0.8	PK	39	II	—

X171 Engine Harness to Ignition Coil (Even) Harness





Connector Part Information

Harness Type: Engine

OEM Connector: 12047938

Service Connector: 13580883

Description: 8-Way F 150 Metri-Pack Series, Sealed (L-GY)

Connector Part Information

Harness Type: Ignition Coil (Even)

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M

Terminal Part Information

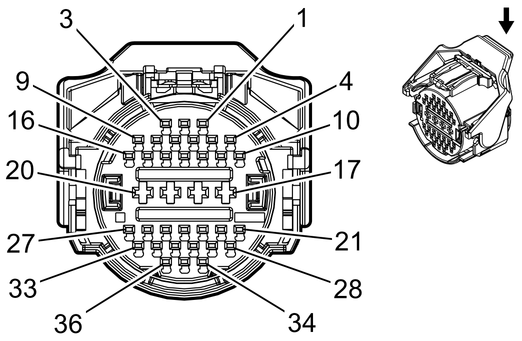
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

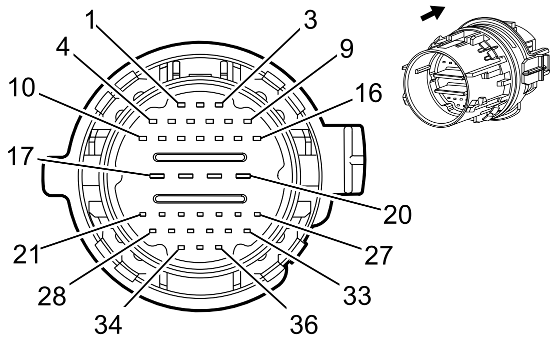
X171 Engine Harness to Ignition Coil (Even) Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	BK	350	I	—	Ground	A	0.75	BK	350	II	—
B	0.5	D-BU/WH	2122	I	—	Ignition Control 2	B	0.5	D-BU/WH	2122	II	—

C	0.5	YE/D-BU	2124	I	—	Ignition Control 4	C	0.5	YE/D-BU	2124	II	—
E	0.5	BK/GY	2130	I	—	Ignition Control Low Reference Bank 2	E	0.5	BK/GY	2130	II	—
F	0.5	BN/D-BU	2126	I	—	Ignition Control 6	F	0.5	BN/D-BU	2126	II	—
G	0.5	VT/WH	2128	I	—	Ignition Control 8	G	0.5	VT/WH	2128	II	—
H	0.75	VT/D-BU	5292	I	—	Powertrain Main Relay Fused Supply 3	H	0.75	VT/D-BU	5292	II	—

X175 Engine Harness to Transmission Harness (M5U)





Connector Part Information

Harness Type: Engine

OEM Connector: 15504573

Service Connector: Service by Harness - See Part Catalog

Description: 36-Way F 1.2 MCON-CB, 2.8 MCP Series, Sealed (BK)

Connector Part Information

Harness Type: Transmission

OEM Connector: 2138338-5

Service Connector: Service by Harness - See Part Catalog

Description: 36-Way M 1.2 MCON, 2.8 MQP Series (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

X175 Engine Harness to Transmission Harness (M5U)

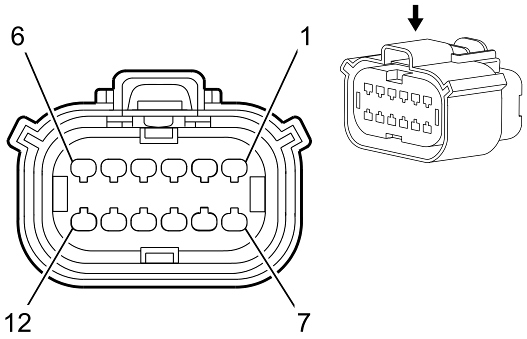
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN/WH	6380	I	—	TCC On/Off Solenoid A Control	1	0.5	GN/WH	6380	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.5	YE/BN	6404	I	—	Clutch E Control	3	0.50	YE/BN	6404	II	—

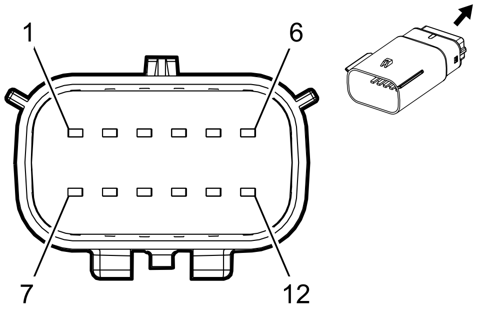
3	0.5						3	0.50				
4	0.5	GY/GN	6403	I	—	Clutch D Control	4	0.50	GY/GN	6403	II	—
5	0.5	BN	6400	I	—	Clutch A Control	5	0.50	BN	6400	II	—
6	0.5	BU	6401	I	—	Clutch B Control	6	0.50	BU	6401	II	—
7	0.5	YE/BN	6210	I	—	TCC On/Off Solenoid B Control	7	0.50	YE/BN	6210	II	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	GY	6402	I	—	Clutch C Control	10	0.50	GY	6402	II	—
11	0.5	BK/BN	586	I	—	Transmission Oil Temperature Sensor Low Reference	11	0.50	BK/BN	586	II	—
12	0.5	BN/WH	585	I	—	Transmission Oil Temperature Sensor Signal	12	0.50	BN/WH	585	II	—
13	0.5	WH	4508	I	—	Transmission Clutch G Control	13	0.50	WH	4508	II	—
14	0.5	WH/BU	4507	I	—	Transmission Clutch H Control	14	0.50	WH/BU	4507	II	—
15 - 17	—	—	—	—	—	Not Occupied	15 - 17	—	—	—	—	—
18	0.75	GN/GY	6387	I	—	Transmission High Side Driver 1 Signal Driver	18	2.5	GN/GY	6387	II	—

19	0.75	GY/BN	6388	I	—	Transmission High Side Driver 2 Signal	19	2.5	GY/BN	6388	II	—
20	—	—	—	—	—	Not Occupied	20	—	—	—	—	—
21	0.5	WH/BK	5983	I	—	PRNDL C Signal	21	0.50	WH/BK	5983	II	—
22	0.5	VT/WH	5981	I	—	PRNDL A Signal	22	0.50	VT/WH	5981	II	—
23	0.5	GY/WH	4168	I	—	PRNDL P Signal	23	0.50	GY/WH	4168	II	—
24	0.5	GY/BU	6358	I	—	Output Speed Signal	24	0.50	GY/BU	6358	II	—
25	0.5	YW/GN	4170	I	—	Transmission Position Sensor B 9V Reference	25	0.50	YE/GN	4170	II	—
26	0.5	GN/YE	6353	I	—	Input Speed Signal	26	0.50	GN/YE	6353	II	—
27	0.5	YE/BU	4171	I	—	Transmission Position Sensor A 9V Reference	27	0.50	YE/BU	4171	II	—
28	0.5	GY/BN	5982	I	—	PRNDL B Signal	28	0.50	GY/BN	5982	II	—
29	0.5	YE/BU	4171	I	—	Transmission Position Sensor A 9V Reference	29	0.50	YE/BU	4171	II	—
		BK/GY	3927	I	—	IMS Mode Switch Low			BK/GY	3927	II	—

30	0.5					Reference	30	0.50				
31	0.5	YE/GN	4170	I	—	Transmission Position Sensor B 9V Reference	31	0.50	YE/GN	4170	II	—
32	0.5	GN/VT	4510	I	—	Transmission Intermediate Speed Signal	32	0.50	GN/VT	4510	II	—
33	—	—	—	—	—	Not Occupied	33	—	—	—	—	—
34	0.5	GY/YE	4169	I	—	PRNDL S Signal	34	0.50	GY/YE	4169	II	—
35	0.5	WH/GY	1786	I	—	Transmission Park/Neutral Signal 1	35	0.50	WH/GY	1786	II	—
36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—

X182 Chassis Harness to Power Steering Jumper Harness





Connector Part Information

Harness Type: Chassis

OEM Connector: 13609715

Service Connector: 19178148

Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Power Steering Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M

Terminal Part Information

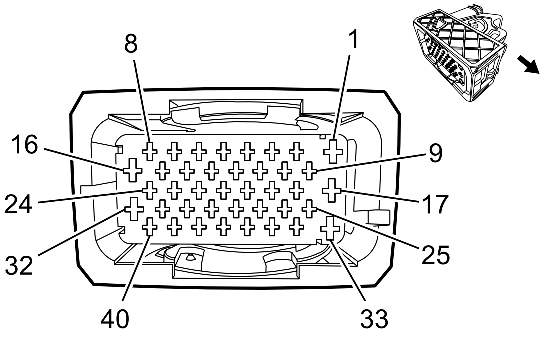
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575808	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

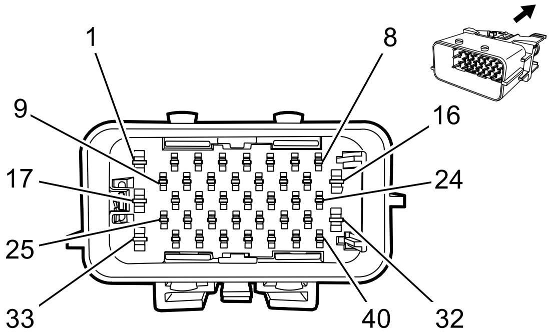
X182 Chassis Harness to Power Steering Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	2	0.5	WH	2501	II	—
3	0.5	D-BU	2500	I	—	High Speed GMLAN	3	0.5	D-BU	2500	II	—

3	0.5					Serial Data (+) 1	3	0.5				
4	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	4	0.5	WH	6106	II	—
5	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	5	0.5	D-BU/YE	6105	II	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—
8	0.5	WH/D-BU	5986	I	—	Serial Data Communication Enable	8	0.5	WH/D-BU	5986	II	—
9	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	9	0.5	WH	2501	II	—
10	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	10	0.5	D-BU	2500	II	—
11	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	11	0.5	WH	6106	II	—
12	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	12	0.5	D-BU/YE	6105	II	—

X185 Chassis Harness to Body Harness





Connector Part Information

Harness Type: Chassis

OEM Connector: 13603185

Service Connector: 13576549

Description: 40-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body

OEM Connector: 15504586

Service Connector: 13576551

Description: 40-Way M 1.5, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578884	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	13580829	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	19301764	J-35616-2A (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VII	13580827	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X185 Chassis Harness to Body Harness

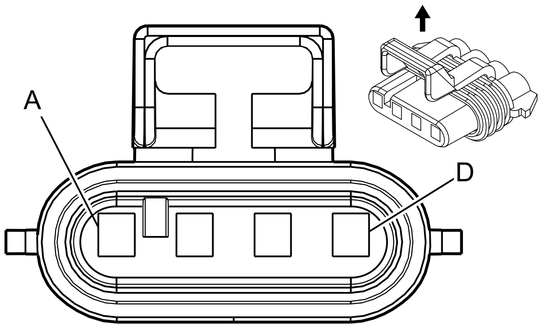
Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option

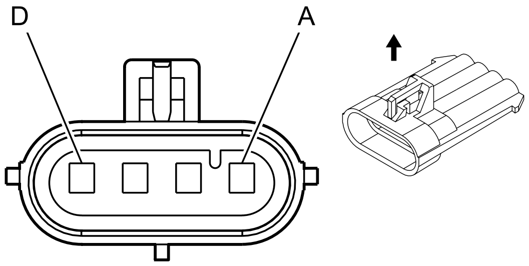
				ID							ID	
1	0.5	GN/BK	7633	III	—	Integrated Trailer Brake Controller User Gain Signal	1	0.5	GN/BK	7633	VII	—
2	0.5	GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	2	0.35	GN/BN	2087	VIII	—
3	0.5	YE	7635	I	—	Integrated Trailer Brake Controller Manual Apply Signal	3	0.5	YE	7635	IV	—
4	0.5	D-BU/RD	7632	I	—	Integrated Trailer Brake Controller Switch 5V Reference	4	0.5	D-BU/RD	7632	IV	—
5	0.5	BN	7634	I	—	Integrated Trailer Brake Controller Redundant Manual Apply Signal	5	0.5	BN	7634	IV	—
6	0.5	BK/YE	7631	I	—	Integrated Trailer Brake Controller Switch Low Reference	6	0.5	BK/BN	7631	IV	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	8	0.5	GN	5060	IV	—
9	0.5	GY/RD	7684	I	—	Park Brake Apply Switch Voltage Reference	9	0.35	GY/RD	7684	VIII	—
10	0.5	BN	6107	I	—	Park Brake Apply Switch Signal	10	0.35	BN	6107	VIII	—
11	0.5	D-BU/WH	1134	I	—	Park Brake Switch Signal	11	0.35	D-BU/VT	1134	VIII	—
		D-BU/BK	6108	I	—	Park Brake Release			D-BU/BK	6108	VIII	—

12	0.5					Switch Signal	12	0.35				
13	0.5	YE/RD	7683	I	—	Park Brake Release Switch Voltage Reference	13	0.35	YE/RD	7683	VIII	—
14	0.5	YE	1492	I	—	Park Brake Switch Supply Voltage	14	0.35	YE	1492	VIII	—
15	0.5	BK/BN	6045	I	—	Steering Angle Sensor Low Reference	15	0.35	BK/BN	6045	VIII	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	WH/D-BU	5986	III	—	Serial Data Communication Enable	17	0.5	WH/D-BU	5986	VII	—
18	0.5	D-BU	2500	I	—	High Speed GMLAN Serial Data (+) 1	18	0.5	D-BU	2500	IV	—
19	0.5	WH	2501	I	—	High Speed GMLAN Serial Data (-) 1	19	0.5	WH	2501	IV	—
20	0.5	VT/YE	5985	I	—	Accessory Wakeup Serial Data	20	0.5	VT/YE	5985	IV	—
21 - 23	—	—	—	—	—	Not Occupied	21 - 23	—	—	—	—	—
24	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	24	0.75	BN/YE	294	V	—
25	0.75	GY	5911	I	—	Door Lock Actuator Lock Control 2	25	0.75	GY	295	V	—
26 - 31	—	—	—	—	—	Not Occupied	26 - 31	—	—	—	—	—
		D-BU	47	II	—	Trailer Auxiliary Control			D-BU	47	VI	—

32	2.5	D-BU	47	II	—	Trailer Auxiliary Control	32	2.5	D-BU	47	VI	—
33	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	33	2.5	RD/D-BU	1842	VI	—
34	0.5	GY/GN	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	34	0.5	GY/GN	5996	IV	—
35 - 38	—	—	—	—	—	Not Occupied	35 - 38	—	—	—	—	—
39	0.5	BN/WH	7462	I	—	Running Boards Disable Signal	39	0.35	D-BU/YE	6844	VIII	—
40	0.5	GN/GY	817	I	—	Vehicle Speed Signal	40	0.5	GN/GY	817	IV	—

X195 Body Harness to Underhood Harness





Connector Part Information

Harness Type: Body

OEM Connector: 12162144

Service Connector: 13582063

Description: 4-Way F 150 Metri-Pack Series, Sealed (BK)

Connector Part Information

Harness Type: Underhood

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M

Terminal Part Information

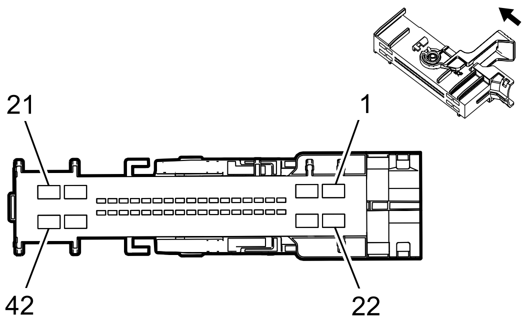
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

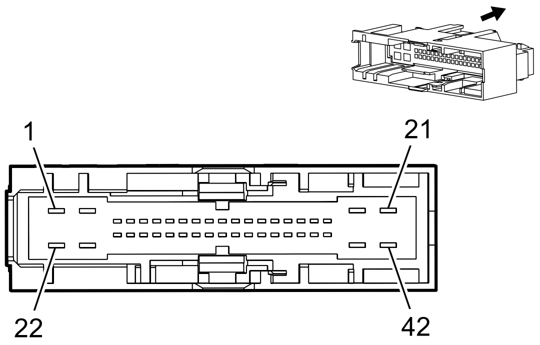
X195 Body Harness to Underhood Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	D-BU/GN	6837	I	—	Siren 1 Supply	A	0.75	D-BU	6837	II	—
B	0.75	GN/YE	6836	I	—	Siren 2 Supply	B	0.75	GN/YE	6836	II	—

C	0.75	GY/VT	6838	I	—	Front Emergency Flasher Control	C	0.75	GY/VT	6838	II	—
D	0.75	YE/GN	6835	I	—	Front Emergency Lamp Control	D	0.75	YE	6835	II	—

X201 Steering Column Harness to Instrument Panel Harness





Connector Part Information

Harness Type: Steering Column

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 42-Way F

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33155180

Service Connector: 13557187

Description: 42-Way M 0.64, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
III	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	13575824	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301762	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
VI	19301763	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available

X201 Steering Column Harness to Instrument Panel Harness

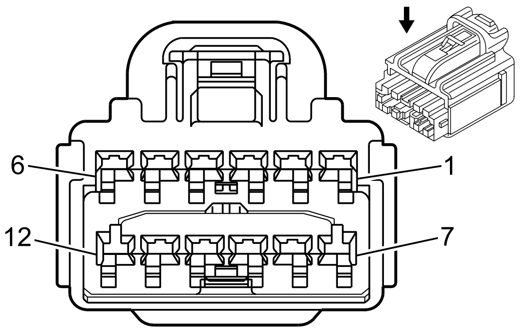
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
		RD/VT	4640	I	—	Battery Positive Voltage			RD/VT	4640	IV	—

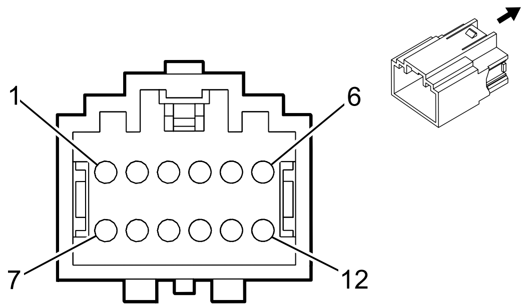
1	1.5						1	1.5				
2	1.5	BK	1850	I	—	Ground	2	1.5	BK	1850	IV	—
3	0.35	VT/BK	3	I	—	Run/Crank Ignition 1 Voltage	3	0.35	VT/BK	3	V	—
4	0.5	RD/D-BU	540	I	—	Battery Positive Voltage	4	0.5	RD/D-BU	540	VI	—
5	0.35	BN/D-BU	391	I	—	Rear Window Wiper Switch Signal	5	0.35	BN/D-BU	391	V	—
6	0.35	GN/GY	3277	I	—	Vehicle Anti-Theft System Immobilizer Low Reference	6	0.35	GN/GY	3277	V	—
7	0.35	GN/VT	7533	I	—	Local Interconnect Network Serial Data Bus 11	7	0.35	GN/VT	7533	V	—
8	0.35	GY/BK	3276	I	—	Vehicle Anti-Theft System Immobilizer Control	8	0.35	GY/BK	3276	V	—
9	0.35	GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	9	0.35	GN/BN	2087	V	—
10	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	10	0.5	D-BU/YE	6105	VI	—
11	0.5	D-BU/YE	6105	I	—	High Speed GMLAN Serial Data (+) 2	11	0.5	D-BU/YE	6105	VI	—
		GN	5060	I	—	Low Speed GMLAN			GN	5060	V	—

12	0.35					Serial Data	12	0.35				
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	14	0.5	GN/WH	7530	VI	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.35	GN/WH	111	I	—	Hazard Switch Signal	16	0.35	GN/WH	111	V	—
17	0.5	YE/WH	816	I	—	Brake Transmission Shift Interlock Solenoid Control	17	0.5	YE/WH	816	VI	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	GN/VT	1601	I	—	Steering Column Lock Signal	19	0.35	GN/VT	1601	V	—
20	1.5	BK	1050	I	—	Ground Ground	20	1.5	BK	1050	IV	—
20	1.5	BK	1050	I	—	Ground Ground	20	1.5	BK	1050	IV	—
21	0.75	RD/GY	4140	I	—	Battery Positive Voltage	21	0.75	RD/GY	4140	III	—
22	—	—	—	—	—	Not Occupied	22	—	—	—	—	—
23	0.75	D-BU/VT	807	I	—	OFF /Accessory Ignition Voltage	23	0.75	D-BU/VT	807	III	—
24	0.35	VT/YE	4	I	—	Accessory Ignition Voltage	24	0.35	VT/YE	4	V	—

25	0.35	RD/YE	3040	I	—	Battery Positive Voltage	25	0.35	RD/YE	3040	V	—
26 - 29	—	—	—	—	—	Not Occupied	26 - 29	—	—	—	—	—
30	—	—	—	—	—	Local Interconnect Network Serial Data Bus 5	30	0.5	GN/WH	7527	VI	—
31	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	31	0.5	WH	6106	VI	—
32	0.5	WH	6106	I	—	High Speed GMLAN Serial Data (-) 2	32	0.5	WH	6106	VI	—
33	0.5	GN/BK	3894	I	—	Local Interconnect Network Serial Data Bus 12	33	0.5	GN/BK	3894	VI	—
34 - 37	—	—	—	—	—	Not Occupied	34 - 37	—	—	—	—	—
38	0.35	BN	6136	I	—	Control	38	0.35	BN	6136	V	—
39	0.35	D-BU/VT	5904	I	—	Steering Column Lock Status Signal	39	0.35	D-BU/VT	5904	V	—
40	0.35	GN/WH	1932	I	—	Shift Select Switch Park Signal	40	0.35	GN/WH	1932	V	—
41	0.5	VT/WH	1139	I	—	Run/Crank Ignition 1 Voltage	41	0.5	VT/WH	1139	II	—
42	0.5	BK/WH	1851	I	—	Signal Ground	42	0.5	BK/WH	1851	II	—

X203 Headliner Harness to Instrument Panel Harness





Connector Part Information

Harness Type: Headliner

OEM Connector: 13507762

Service Connector: 89046712

Description: 12-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13507705

Service Connector: 88988266

Description: 12-Way M 1.5 Series (L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575850	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
III	19301756	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575818	J-35616-3 (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available
V	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
VI	19300435	J-35616-14 (GN)	J-38125-217	Not Available	Not Available	Not Available	Not Available
VII	19301755	J-35616-41 (BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

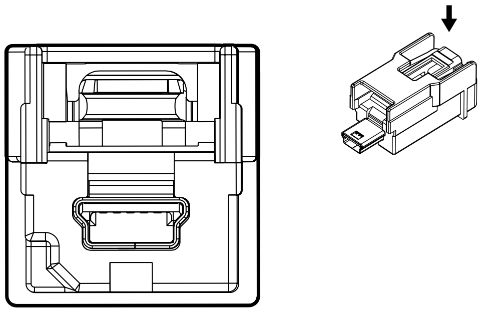
X203 Headliner Harness to Instrument Panel Harness

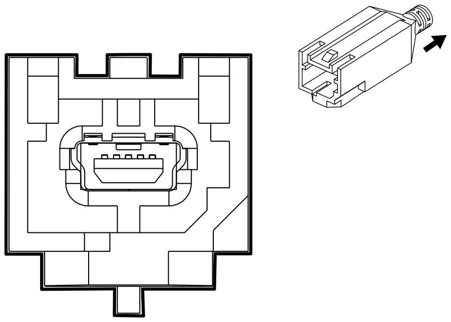
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option

1	0.35	BK/WH	2550	I	—	Ground	1	0.35	BK	2550	IV	—
	0.5	BK/WH	2550	I	—	Ground						
	0.5	BK/WH	2550	II	—	Ground						
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BK/BN	654	II	—	Cellular Telephone Microphone Low Reference	3	0.35	BK/BN	654	IV	—
4	0.35	D-BU	655	II	—	Cellular Telephone Microphone Signal	4	0.35	D-BU	655	IV	—
5	0.35	RD/GN	1540	I	—	Battery Positive Voltage	5	0.5	RD/GN	1540	VI	—
	0.5	RD/GN	1540	I	—	Battery Positive Voltage						
	0.5	RD/GN	1540	II	—	Battery Positive Voltage						
6	0.35	WH/D-BU	5986	II	—	Serial Data Communication Enable	6	0.5	WH/D-BU	5986	V	—
						Serial Data Communication Enable		0.5	WH/D-BU	5986	VI	—
7	0.35	GN/YE	7531	III	—	Local Interconnect Network Serial Data Bus 9	7	0.35	GN/YE	7531	VII	—
		D-BU/GY	3935	II	—	High Speed GMLAN			D-BU/GY	3935	IV	—

8	0.35					Serial Data (+) 8 High Speed GMLAN Serial Data (+) 8	8	0.35 0.35	D-BU/GY	3935	V	—
9	0.35	WH/GY	3936	II	—	High Speed GMLAN Serial Data (-) 8 High Speed GMLAN Serial Data (-) 8	9	0.35 0.35	WH/GY WH/GY	3936 3936	IV V	— —
10	0.35 0.35 0.5	GN/YE GN/YE GN/YE	7066 7066 7066	I II I	— — —	Entertainment Remote Enable Signal Entertainment Remote Enable Signal Entertainment Remote Enable Signal	10	0.35	GN/YE	7066	VII	—
11	0.35	D-BU/GY	3935	II	—	High Speed GMLAN Serial Data (+) 8 High Speed GMLAN Serial Data (+) 8	11	0.5 0.5	D-BU/GY D-BU/GY	3935 3935	VI V	— —
12	0.35	WH/GY	3936	II	—	High Speed GMLAN Serial Data (-) 8 High Speed GMLAN Serial Data (-) 8	12	0.5 0.5	WH/GY WH/GY	3936 3936	VI V	— —

X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 with DNU)





Connector Part Information

Harness Type: Headliner LVDS

OEM Connector: 13927855

Service Connector: Service by Harness — See Part Catalog

Description: 5–Way F USB Type (WH)

Connector Part Information

Harness Type: Instrument Panel LVDS

OEM Connector: 13933708

Service Connector: Service by Harness — See Part Catalog

Description: 5–Way M USB Type

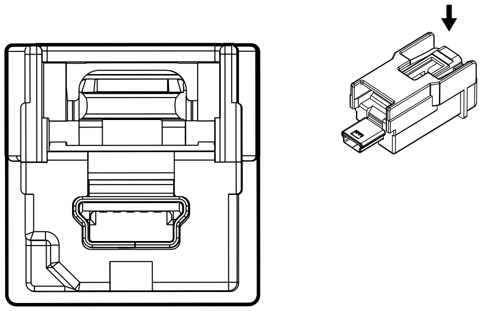
Terminal Part Information

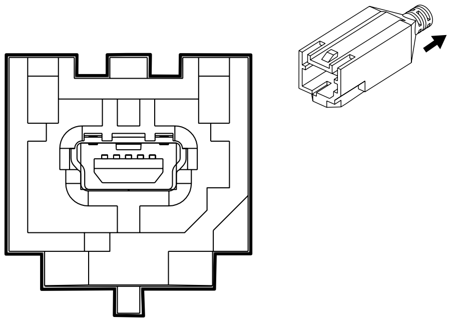
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 with DNU)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	LVDS	—	I	—	Video Display Signal	—	—	LVDS	—	I	—

X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 without DNU)





Connector Part Information

Harness Type: Headliner LVDS

OEM Connector: 13927848

Service Connector: Service by Harness — See Part Catalog

Description: 5–Way F USB Type

Connector Part Information

Harness Type: Instrument Panel LVDS

OEM Connector: 13933708

Service Connector: Service by Harness — See Part Catalog

Description: 5–Way M USB Type

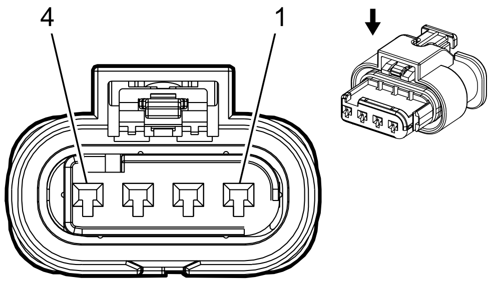
Terminal Part Information

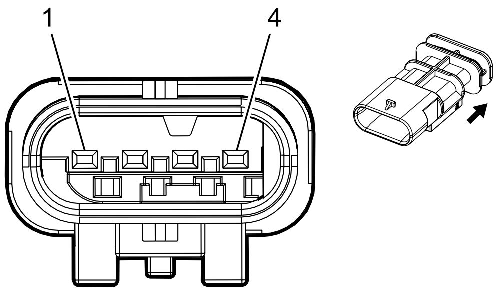
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X204 Instrument Panel Harness LVDS to Headliner Harness LVDS (U42 without DNU)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	LVDS	—	I	—	Video Display Signal	—	—	LVDS	—	I	—

X205 Instrument Panel Harness to Passenger Air Bag Jumper Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13854531

Service Connector: 13586137

Description: 4-Way F 1.2 Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Air Bag Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M

Terminal Part Information

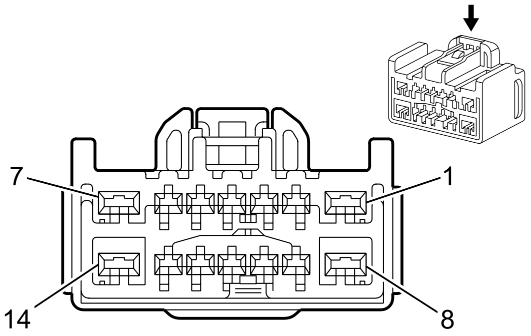
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

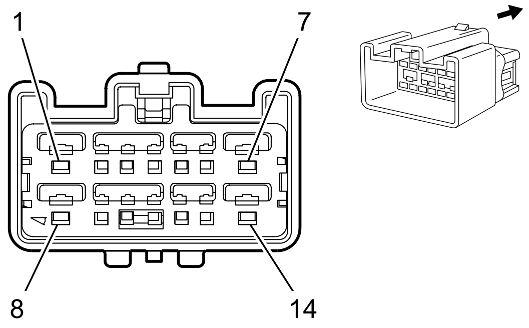
X205 Instrument Panel Harness to Passenger Air Bag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE/OG	3025	I	—	Passenger IP Module Stage 1 High Control	1	.35	YE	3025	II	—
2	0.35	OG/WH	3024	I	—	Passenger IP Module Stage 1 Low Control	2	.35	OG	3024	II	—

3	0.35	GY/OG	3027	I	—	Passenger IP Module Stage 2 High Control	3	.35	GY	3027	II	—
4	0.35	OG/VT	3026	I	—	Passenger IP Module Stage 2 Low Control	4	.35	OG	3026	II	—

X215 HVAC Harness to Instrument Panel Harness





Connector Part Information

Harness Type: HVAC

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10846900

Service Connector: 88956523

Description: 14-Way M 1.5, 2.8 Series (L-GY)

Terminal Part Information

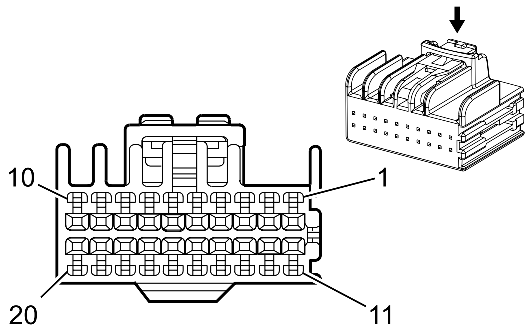
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	13575818	J-35616-3 (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available

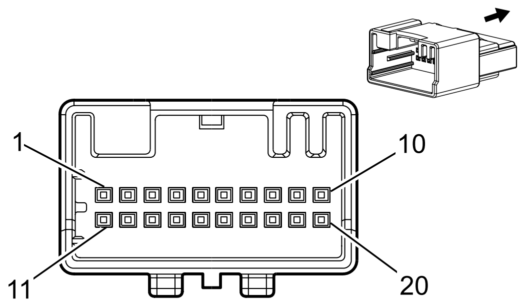
X215 HVAC Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	GN	5060	I	—	Low Speed GMLAN Serial Data	2	0.35	GN	5060	II	—
3	0.35	GN/YE	7531	I	—	Local Interconnect	3	0.35	GN/YE	7531	II	—

3	0.35					Network Serial Data Bus 9	3	0.35			
4	0.5	RD/VT	3340	I	—	Battery Positive Voltage	4	0.5	RD/VT	3340	II	—
5	0.5	VT/GY	539	I	—	Run/Crank Ignition 1 Voltage	5	0.5	VT/GY	539	II	—
6 - 8	—	—	—	—	—	Not Occupied	6 - 8	—	—	—	—	—
9	0.35	BK/WH	1851	I	—	Signal Ground	9	0.35	BK/WH	1851	II	—
10	0.35	BK/YE	1791	I	—	Air Temperature Door Control Low Reference	10	0.35	BK/YE	1791	II	—
11	0.35	D-BU/WH	734	I	—	Inside Air Temperature Sensor Signal	11	0.35	D-BU/WH	734	II	—
12	0.35	GY	590	I	—	Solar Sensor Driver Signal	12	0.35	GY	590	II	—
13	0.35	YE/VT	1783	I	—	Twilight Sentinel Delay Signal	13	0.35	YE/VT	1783	II	—
14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—

X216 Body Harness to HVAC Harness





Connector Part Information

Harness Type: Body

OEM Connector: 13899026

Service Connector: 88988264

Description: 20-Way F 0.64 YESC Series (L-GY)

Connector Part Information

Harness Type: HVAC

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way M

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575847	J-35616-64B (LT BU)	J-38125-553	7116-4720-02	Yazaki 14	H	H
II	13578896	J-35616-64B (LT BU)	J-38125-553	7116-4721-02	Yazaki 14	J	J
III	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

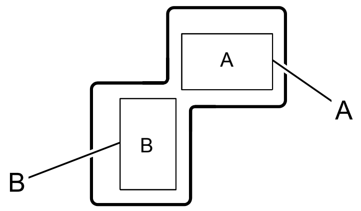
X216 Body Harness to HVAC Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 5	—	—	—	—	—	Not Occupied	1 - 5	—	—	—	—	—
6	0.5	D-BU/YE	7574	II	—	Electric Variable Displacement Control	6	0.5	D-BU/YE	7574	III	—

7	0.5	D-BU/BN	7573	II	—	Electric Variable Displacement Supply	7	0.5	D-BU/BN	7573	III	—
8	0.35	BK/YE	407	I	—	Sensor Low Reference	8	0.35	BK/YE	407	III	—
9	0.35	BN/BK	405	I	—	Lower Air Temperature Sensor Signal	9	0.35	BN/BK	405	III	—
10	0.35	BN	404	I	—	Upper Air Temperature Sensor Signal	10	0.35	BN	404	III	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—
12	0.35	GN/BK	2211	I	—	Rear Blower Motor Speed Control	12	0.35	GN/BK	2211	III	—
13	0.5	BN/VT	193	II	—	Rear Defog Relay Control	13	0.5	BN/VT	193	III	—
14	0.35	GY/RD	598	I	—	5V Reference	14	0.35	GY/RD	598	III	—
15	0.35	GY/D-BU	2145	I	—	Passenger Air Temperature Switch Signal	15	0.35	GY/D-BU	2145	III	—
16	0.35	GY	2614	I	—	Rear Air Temperature Door Control	16	0.35	GY	2614	III	—
17	0.35	WH/BN	2775	I	—	Rear Air Temperature Motor Control	17	0.35	WH/BN	2775	III	—
18	0.35	GY	2599	I	—	Rear Mode Motor Signal	18	0.35	GY	2599	III	—

19	0.35	BK/GN	5730	I	—	Rear Mode Motor Low Reference	19	0.35	BK	5730	III	—
20	0.35	GN/WH	5729	I	—	Rear Mode Motor Control	20	0.35	GN/WH	5729	III	—

X217 Body Harness to HVAC Harness



—

Connector Part Information

Harness Type: Body

OEM Connector: 10721337

Service Connector: 88953301

Description: 2-Way F 56 Series (BK)

Connector Part Information

Harness Type: HVAC

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M

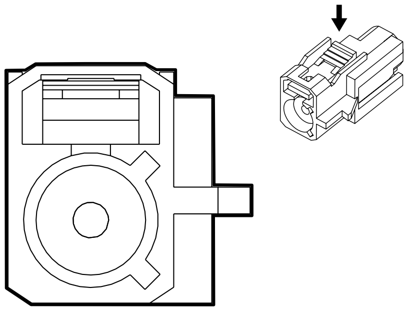
Terminal Part Information

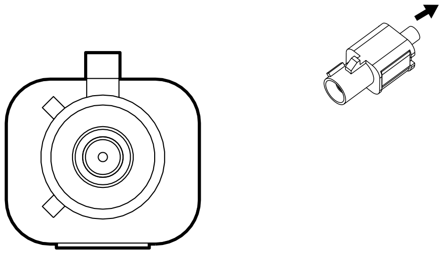
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-22 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X217 Body Harness to HVAC Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	4	RD/VT	542	I	—	Battery Positive Voltage	A	4	RD/VT	542	II	—
B	—	—	—	—	—	Not Occupied	B	—	—	—	—	—

X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)+IO6





Connector Part Information

Harness Type: Instrument Panel COAX

OEM Connector: 13585498

Service Connector: Service by Cable — See Part Catalog

Description: 1-Way F Coax (PU)

Connector Part Information

Harness Type: A-Pillar COAX

OEM Connector: 13585533

Service Connector: Service by Cable — See Part Catalog

Description: 1-Way M Coax (PU)

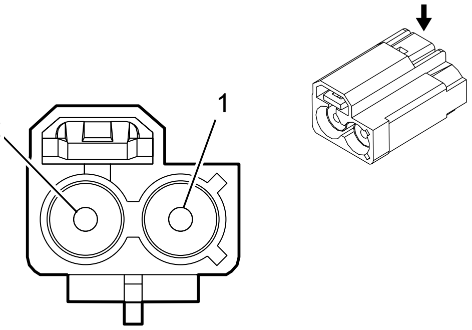
Terminal Part Information

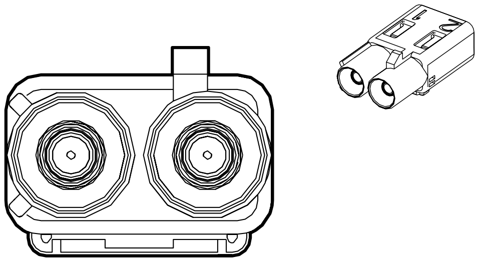
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)+IO6

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	COAX	—	I	—	Coaxial Antenna Cell Phone Signal	—	—	COAX	—	I	—

X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)-IO6





Connector Part Information

Harness Type: Instrument Panel COAX

OEM Connector: 13589366

Service Connector: Service by Cable — See Part Catalog

Description: 2-Way F Coax (PU)

Connector Part Information

Harness Type: A-Pillar COAX

OEM Connector: 2FAH-NDSP-C00W9

Service Connector: Service by Cable — See Part Catalog

Description: 2-Way M Coax (PU)

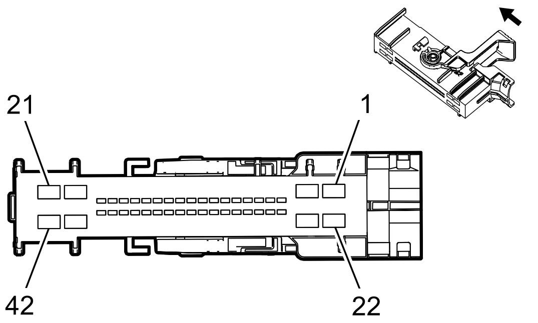
Terminal Part Information

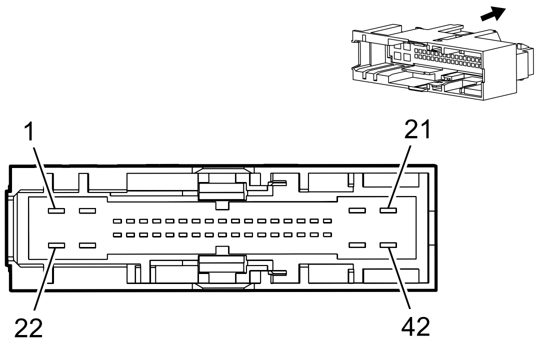
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X222 Instrument Panel COAX to A-Pillar Harness COAX (VV4 or CV3)-IO6

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	COAX	—	I	—	Coaxial Antenna Cell Signal	1	—	COAX	—	I	—
2	— —	COAX COAX	— —	I	VV4 CV3	Coaxial Antenna Cell/GPS Signal Coaxial Antenna GPS Signal	2	— —	COAX COAX	— —	I	VV4 CV3

X225 Body Harness to Instrument Panel Harness





Connector Part Information

Harness Type: Body

OEM Connector: 33160247

Service Connector: 19301820

Description: 42-Way F 1.2, 2.8 Series (GY)

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33155179

Service Connector: 13597186

Description: 42-Way M 0.64, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
II	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IV	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
V	19301762	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
VI	19301763	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
VII	19329828	J-35616-5 (PU)	J-38125-212	Not Available	Not Available	Not Available	Not Available
VIII	19333310	J-35616-65B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available

X225 Body Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option

				ID							ID	
1	0.75	YE/GY	1956	II	—	Left Front Tweeter Speaker (-) Low Reference	1	0.75	YE/GY	1956	VII	—
2	1.5	BK	1850	III	—	Ground	2	0.75	BK	1850	VII	—
3	0.5	GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	3	0.5	GN/WH	7530	VI	—
4	0.5	WH/BN	6815	I	—	Inadvertent Power Control	4	0.5	WH/BN	6815	VI	—
5	0.35	GY/WH	3272	I	—	Remote Function Actuator Control	5	0.35	GY/WH	3272	V	—
6	0.35	D-BU/WH	3275	I	—	Remote Function Actuator Receive Signal	6	0.35	D-BU/WH	3275	V	—
7	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	7	0.35	VT/YE	43	V	—
8	0.35 0.5	GN GY/VT	3998 3998	I I	— —	MOST Serial Data (+) MOST Serial Data (+)	8	0.5	GY/VT	3998	VI	—
9	0.35	BN/BK	3552	I	—	Passive Start Interior Antenna 1 Signal Hi	9	0.35	BN/BK	3552	V	—
10	0.35	WH	3553	I	—	Passive Start Interior Antenna 1 Signal Lo	10	0.35	WH	3553	V	—

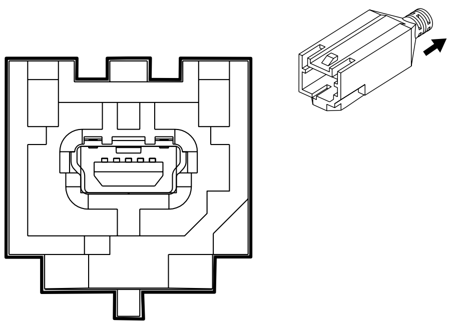
11	0.35	WH/GN	3997	I	—	MOST Serial Data (-)	11	0.5	WH/GN	3997	VI	—
		WH/GN	3997	I	—	MOST Serial Data (-)						
	0.5											
12	0.5	BN/D-BU	118	I	—	Left Front Speaker Signal (-) 1	12	0.5	BN/D-BU	118	VI	—
13	0.35	BK/GY	3559	I	—	Passive Start Switch 2 Low Reference	13	0.35	BK/GY	3559	V	—
14	0.5	GN	199	I	—	Left Rear Speaker Control (+)	14	0.5	GN	199	VI	—
15	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	15	0.5	D-BU/VT	3813	VI	—
16	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	16	0.5	WH	3811	VI	—
17	0.35	VT/BK	3	I	—	Run/Crank Ignition 1 Voltage	17	0.35	VT/BK	3	V	—
18	0.35	VT/YE	4	I	—	Accessory Ignition Voltage	18	0.35	VT/YE	4	V	—
19	0.35	GN/WH	24	I	—	Backup Lamp Control	19	0.35	GN/WH	24	V	—
20	0.5	BN/D-BU	118	II	UQ3	Left Front Speaker Signal (-) 1	20	0.75	BN/D-BU	118	VII	—
		BN/D-BU	118		UQ3/UQ5							

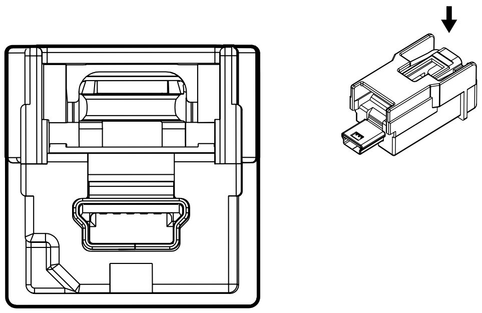
	0.75					Left Front Speaker Signal (-) 1					
21	0.35	GN/BK	3558	II	—	Passive Start Switch Signal 2	21	0.35	GN/BK	3558	IV	—
22	0.75	YE/D-BU	1856	II	—	Left Front Tweeter Speaker Control (+)	22	0.75	YE/D-BU	1856	VII	—
23	0.35	GN	4512	II	—	Wireless Charging System Charge Indicator Control	23	0.35	GN	4512	VII	—
24	0.35	D-BU/BN	3161	I	—	Parallel Park Assist Disable Switch Signal	24	0.35	D-BU/BN	3161	V	—
25	0.35	BN/WH	419	I	—	Check Engine Indicator Control	25	0.35	BN/WH	419	V	—
26	0.35	YE/GN	3274	I	—	Remote Function Actuator Transmit Signal	26	0.35	YE/GN	3274	V	—
27	0.35	GY	3273	I	—	Remote Function Actuator Low Reference	27	0.35	GY	3273	V	—
28	0.5	BK	1850	I	—	Ground	28	0.75	BK	1850	VIII	—
29	0.35 0.5	YE WH/GN	3997 3997	I I	— -UQA-UQG-UQH-UQS	MOST Serial Data (-) MOST Serial Data (-)	29	0.5	WH/GN	3997	VI	—

30	0.35	D-BU/VT	1134	I	—	Park Brake Switch Signal	30	0.35	D-BU/VT	1134	V	—
31	0.35	GY/RD	7684	I	—	Park Brake Apply Switch Voltage Reference	31	0.35	GY/RD	7684	V	—
32	0.35 0.5	GY/VT GY/VT	3998 3998	I I	— -UQA-UQG-UQH-UQS	MOST Serial Data (+) MOST Serial Data (+)	32	0.5	GY/VT	3998	VI	—
33	0.5	D-BU	201	I	—	Left Front Speaker Control (+) 1	33	0.5	D-BU	201	VI	—
34	0.35	BN	6107	I	—	Park Brake Apply Switch Signal	34	0.35	BN	6107	V	—
35	0.5	GN/BK	116	I	—	Left Rear Speaker Signal (-)	35	0.5	GN/BK	116	VI	—
36	0.35	D-BU/BK	6108	I	—	Park Brake Release Switch Signal	36	0.35	D-BU/BK	6108	V	—
37	0.35	YE/RD	7683	I	—	Park Brake Release Switch Voltage Reference	37	0.35	YE/RD	7683	V	—
38	0.35	GN/BN	2087	I	—	Combined Vehicle Inertial Sensor Supply Voltage	38	0.35	GN/BN	2087	V	—
39	0.35	YE	1492	I	—	Park Brake Switch Supply Voltage	39	0.35	YE	1492	V	—
		GN/GY	6135	I	—	Local Interconnect			GN/GY	6135	VI	—

40	0.5					Network Serial Data Bus 4	40	0.5					
41	0.5 0.75	D-BU D-BU	201 201	II	UQ3 UQ3/UQ5	Left Front Speaker Control (+) 1 Left Front Speaker Control (+) 1	41	0.75	D-BU	201	VII	—	
42	0.35	D-BU/YE	6844	II	—	ABS/TCS Hill Descent Control Switch Signal	42	0.35	D-BU/YE	6844	VII	—	

X238 Body Harness USB to Instrument Panel Harness USB (AZ3)





Connector Part Information

Harness Type: Body USB

OEM Connector: 13584761

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way M 2.0 Mini B USB Type (GY)

Connector Part Information

Harness Type: Instrument Pane USB

OEM Connector: 13868840

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way F 2.0 Mini B USB Type (GY)

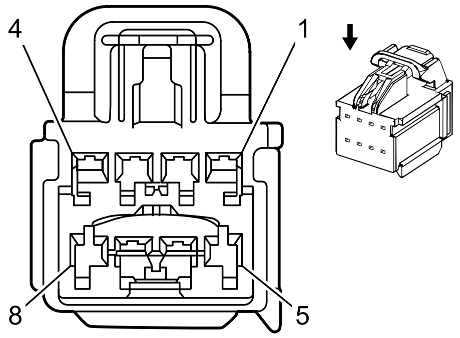
Terminal Part Information

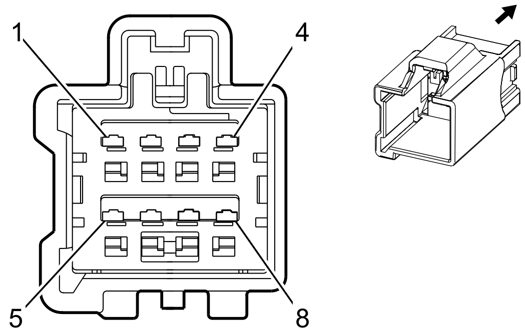
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X238 Body Harness USB to Instrument Panel Harness USB (AZ3)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X271 Instrument Panel Harness to Instrument Panel Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10846802

Service Connector: 19153166

Description: 8-Way F 1.5 YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10847035

Service Connector: 19153162

Description: 8-Way M 1.5 YESC Kaizen Series (L-GY)

Terminal Part Information

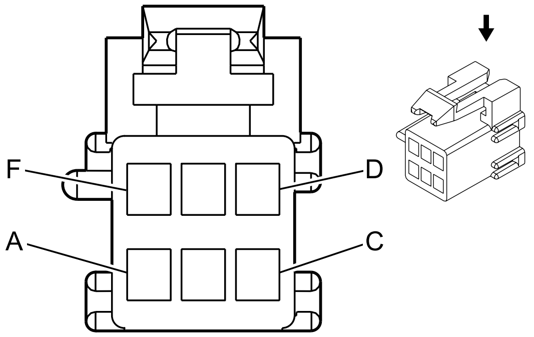
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

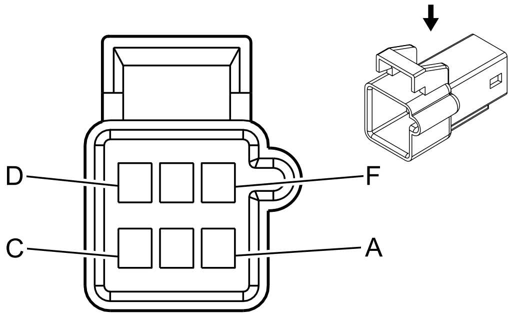
X271 Instrument Panel Harness to Instrument Panel Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN/D-BU	118	II	—	Left Front Speaker Signal (-) 1	1	0.75	BN/D-BU	118	III	—
2	0.75	YE/BK	117	II	—	Right Front Speaker	2	0.75	YE/BK	117	III	—

2	0.75					Signal (-) 1	2	0.75			
3	0.5	GN/BK	116	I	—	Left Rear Speaker Signal (-)	3	0.5	GN/BK	116	III	—
4	0.5	D-BU/BK	115	I	—	Right Rear Speaker Signal (-)	4	0.5	D-BU/BK	115	III	—
5	0.75	D-BU	201	II	—	Left Front Speaker Control (+) 1	5	0.75	D-BU	201	III	—
6	0.75	YE	200	II	—	Right Front Speaker Control (+) 1	6	0.75	YE	200	III	—
7	0.5	GN	199	I	—	Left Rear Speaker Control (+)	7	0.5	GN	199	III	—
8	0.5	WH	46	I	—	Right Rear Speaker Control (+)	8	0.5	WH	46	III	—

X272 Instrument Panel Harness to Upfitter Jumper Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 12064762

Service Connector: 13583923

Description: 6-Way F 150 Metri-Pack Series (GY)

Connector Part Information

Harness Type: Upfitter Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M

Terminal Part Information

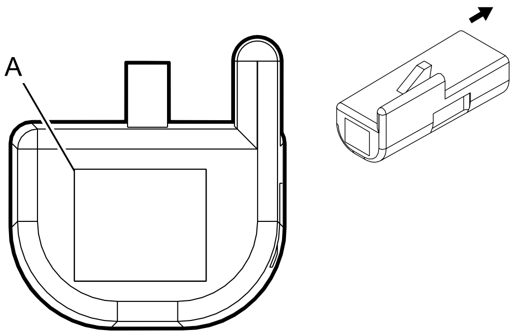
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

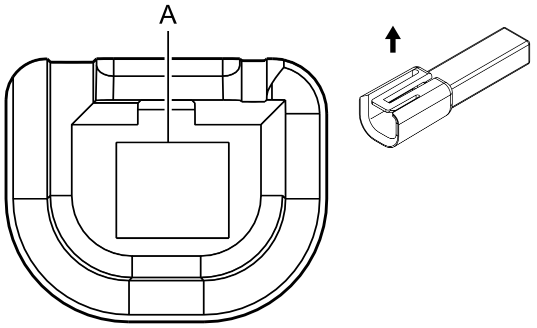
X272 Instrument Panel Harness to Upfitter Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	GN	6820	I	—	Exterior Lamp Flasher Signal	A	0.75	GN	6820	II	—
B	0.75	D-BU/GN	6837	I	—	Siren 1 Supply	B	0.75	D-BU	6837	II	—

C	0.75	GN/YE	6836	I	—	Siren 2 Supply	C	0.75	GN/YE	6836	II	—
D	0.75	GY/VT	6838	I	—	Front Emergency Flasher Control	D	0.75	GY/VT	6838	II	—
E	0.75	YE/GN	6835	I	—	Front Emergency Lamp Control	E	0.75	YE	6835	II	—
F	—	—	—	—	—	Not Occupied	F	—	—	—	—	—

X273 Body Harness to Body Harness





Connector Part Information

Harness Type: Body

OEM Connector: 12047682

Service Connector: 12101850

Description: 1-Way F 150 Metri-Pack Series (BK)

Connector Part Information

Harness Type: Body

OEM Connector: 12047683

Service Connector: 12101828

Description: 1-Way M 150 Metri-Pack Series (BK)

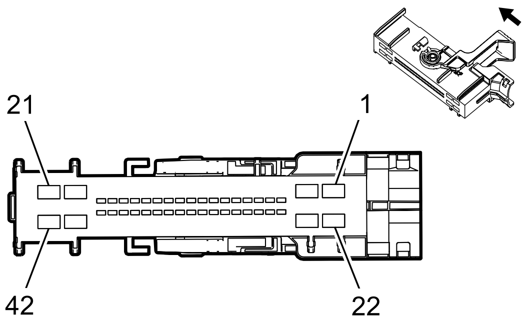
Terminal Part Information

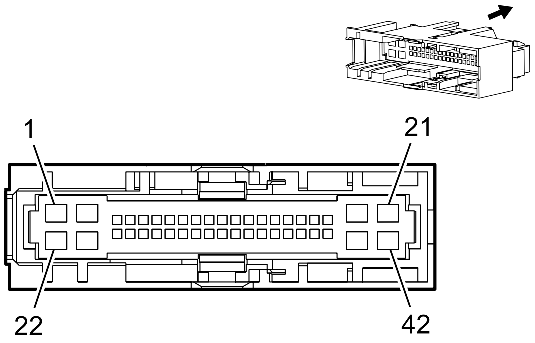
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X273 Body Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.35	BN/WH	28	I	—	Horn Relay Control	A	0.35	BN/WH	28	II	—

X275 Instrument Panel Harness to Body Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 33160245

Service Connector: 19332682

Description: 42-Way F 1.2, 2.8 Series (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 33155177

Service Connector: 13597184

Description: 42-Way M 0.64, 2.8 Series (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13582232	J-35616-64B (LT BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VII	13575824	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VIII	19301762	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
IX	19301763	J-35616-65B (LT BU)	J-38125-22	Not Available	Not Available	Not Available	Not Available
X	19329828	J-35616-5 (PU)	J-38125-212	1326029-8	Lear 17	A	4

XI	19329828	J-35616-5 (PU)	J-38125-212	Not Available	Not Available	Not Available	Not Available
XII	19329836	J-35616-35 (VT)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X275 Instrument Panel Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	VT/BN	1952	IV	—	Right Front Tweeter Speaker (-) Low Reference	1	0.75	VT/BN	1952	XI	—
2	1.5	VT/YE	143	V	—	Accessory Ignition Voltage Accessory Ignition Voltage	2	1.5 1.5	VT/YE VT/YE	143 143	X VII	— —
3	0.35	D-BU	2060	III	—	Auxiliary Detection Signal	3	0.35	D-BU	2060	VIII	—
4	0.5	BARE	5842	III	—	Auxiliary Audio Screen 2	4	0.5	BARE	5842	IX	—
5	0.35	VT	5843	III	—	Auxiliary Audio Common Signal	5	0.35	VT	5843	VIII	—
6	0.35	GY	5839	III	—	Left Auxiliary Audio Signal 2	6	0.35	GY	5839	VIII	—
7	0.35	GN	5841	III	—	Right Auxiliary Audio Signal 2	7	0.35	GN	5841	VIII	—
8	0.35	GY/YE	6972	III	—	Camera Signal 2 +	8	0.35	GY/YE	6972	VIII	—
9	0.35	WH/D-BU	6973	III	—	Camera Signal 2	9	0.35	WH/D-BU	6973	VIII	—

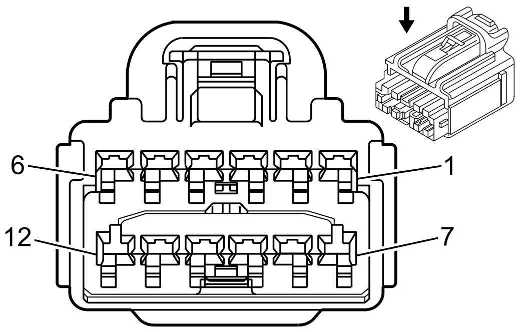
9	0.35						9	0.35			
10	0.75	D-BU/YE	1960	II	—	Front Center Speaker (-) Low Reference	10	0.75	D-BU/YE	1960	IX	—
11	0.35	WH/VT	3999	III	—	MOST Control	11	0.35	WH/VT	3999	VIII	—
12	0.5	YE/BK	117	III	—	Right Front Speaker Signal (-) 1	12	0.5	YE/BK	117	IX	—
13	0.35	BK/D-BU	61	III	—	Outside Ambient Temperature Sensor Low Reference	13	0.35	BK/D-BU	61	VIII	—
14	0.5	WH	46	III	—	Right Rear Speaker Control (+)	14	0.5	WH	46	IX	—
15	0.35	YE/OG	3025	I	—	Passenger IP Module Stage 1 High Control	15	0.35	YE/OG	3025	XII	—
16	0.35	OG/WH	3024	I	—	Passenger IP Module Stage 1 Low Control	16	0.35	OG/WH	3024	XII	—
17	0.35	GY/OG	3027	I	—	Passenger IP Module Stage 2 High Control	17	0.35	GY/OG	3027	XII	—
18	0.35	OG/VT	3026	I	—	Passenger IP Module Stage 2 Low Control	18	0.35	OG/VT	3026	XII	—
19	0.35	GY/VT	755	III	—	RAP Relay Coil Control	19	0.35	GY/VT	755	VIII	—
20	0.75	YE/BK	117	IV	—	Right Front Speaker Signal (-) 1	20	0.5	YE/BK	117	VI	—

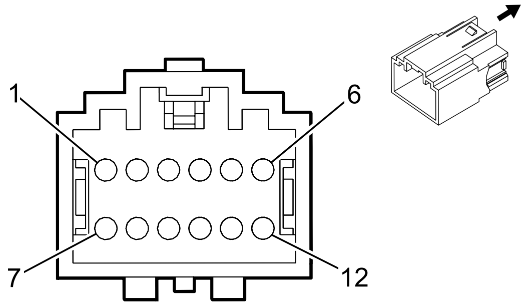
20	0.75					Signal (-) 1 Right Front Speaker Signal (-) 1	20	0.5 0.75	YE/BK	117	VI	—
21	1.5	VT/YE	243	V	—	Accessory Ignition Voltage Accessory Ignition Voltage	21	1.5 1.5	VT/YE VT/YE	243 243	X VII	— —
22	0.75	BN/GN	1852	IV	—	Right Front Tweeter Speaker Control (+)	22	0.75	BN/GN	1852	XI	—
23	0.35 0.5	WH/D-BU WH/D-BU	5986 5986	IV IV	— —	Serial Data Communication Enable Serial Data Communication Enable	23	0.5	WH/D-BU	5986	XI	—
24	0.5	WH/YE	7557	III	—	LED Ambient Lighting Control 1	24	0.35	WH/YE	7557	VIII	—
25	0.5	GN	5060	III	—	Low Speed GMLAN Serial Data	25	0.5	GN	5060	IX	—
26	0.35	GN/WH	1932	III	—	Shift Select Switch Park Signal	26	0.35	GN/WH	1932	VIII	—
27	0.35	D-BU	3554	III	—	Passive Start Interior Antenna 2 Signal Hi	27	0.35	D-BU	3554	VIII	—
28	0.35	GY/BK	3555	III	—	Passive Start Interior Antenna 2 Signal Lo	28	0.35	GY/BK	3555	VIII	—

29	0.35	BARE	6974	III	—	Camera Low Reference	29	0.35	BARE	6974	VIII	—
30	0.35	YE	6812	III	—	Out of Park Signal	30	0.35	YE	6812	VIII	—
31	0.75	YE/WH	1860	II	—	Front Center Speaker Control (+)	31	0.75	YE/WH	1860	IX	—
32	0.5	GY/GN	1102	III	—	Low Speed GMLAN Serial Data #2	32	0.5	GY/GN	1102	IX	—
33	0.5	YE	200	III	—	Right Front Speaker Control (+) 1	33	0.5	YE	200	IX	—
34	0.75	D-BU/GN	6841	II	—	Rear Lamp Flasher Signal	34	0.75	D-BU/GN	6841	IX	—
35	0.5	D-BU/BK	115	III	—	Right Rear Speaker Signal (-)	35	0.5	D-BU/BK	115	IX	—
36	0.35 0.75	D-BU/OG GN	7328 6820	III II	— —	Passenger IP Module Disable Switch Low Reference Exterior Lamp Flasher Signal	36	0.35 0.75	D-BU/OG GN	7328 6820	VIII IX	— —
37	0.35 0.75	VT/OG D-BU/GN	371 6837	III II	— —	Passenger IP Module Disable Switch Signal Siren 1 Supply	37	0.35 0.75	VT/OG D-BU/GN	371 6837	VIII IX	— —

38	0.75	GN/YE	6836	II	—	Siren 2 Supply	38	0.75	GN/YE	6836	IX	—
39	0.75	GY/VT	6838	II	—	Front Emergency Flasher Control	39	0.75	GY/VT	6838	IX	—
40	0.75	YE/GN	6835	II	—	Front Emergency Lamp Control	40	0.75	YE/GN	6835	IX	—
41	0.75	YE	200	IV	—	Right Front Speaker Control (+) 1 Right Front Speaker Control (+) 1	41	0.5 0.75	YE YE	200 200	VI VI	— —
42	0.35	D-BU/GY	636	IV	—	Outside Ambient Air Temperature Sensor Signal	42	0.35	D-BU/GY	636	XI	—

X295 Instrument Panel Harness to Body Harness (Z75)





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13507762

Service Connector: 89046712

Description: 12-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Body

OEM Connector: 13507705

Service Connector: 88988266

Description: 12-Way M 1.5 Series (L-GY)

Terminal Part Information

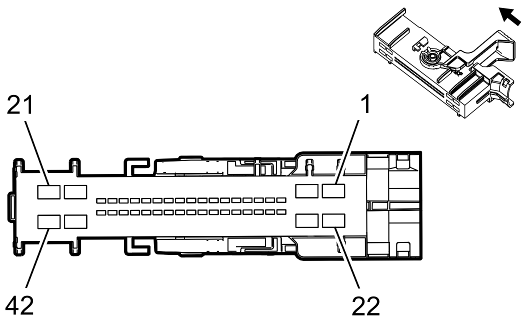
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available

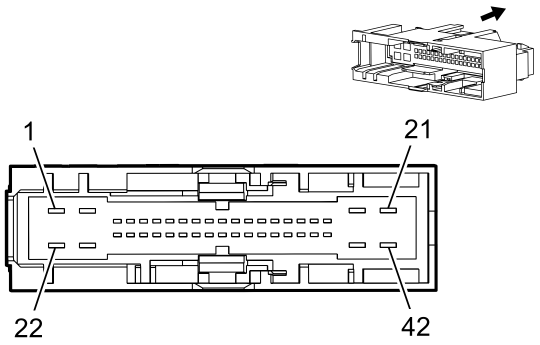
X295 Instrument Panel Harness to Body Harness (Z75)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	D-BU/GY	3935	I	—	High Speed GMLAN Serial Data (+) 8	1	0.5	D-BU/GY	3935	II	—
2	0.35	WH/GY	3936	I	—	High Speed GMLAN Serial Data (-) 8	2	0.5	WH/GY	3936	II	—

3 - 7	—	—	—	—	—	Not Occupied	3 - 7	—	—	—	—	—
8	0.35	WH/VT	2092	I	—	Fuel Saver Mode (ECO) Switch Signal	8	0.35	WH/VT	2092	II	—
9 - 12	—	—	—	—	—	Not Occupied	9 - 12	—	—	—	—	—

X300 Instrument Panel Harness to Floor Console Harness





Connector Part Information

- Harness Type: Instrument Panel
- OEM Connector: 33160247
- Service Connector: 19301820
- Description: 42-Way F 1.2, 2.8 Series (GY)

Connector Part Information

- Harness Type: Floor Console
- OEM Connector: 33155179
- Service Connector: Service by Harness - See Part Catalog
- Description: 42-Way M 0.64, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	19300649	J-35616-64B (LT BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	19300649	J-35616-64B (LT BU)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VI	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X300 Instrument Panel Harness to Floor Console Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
		VT/YE	243	IV	—	Accessory Ignition			VT/YE	243	VI	—

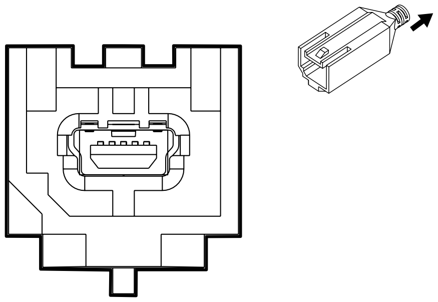
1	1.5					Voltage	1	1.5			
2	—	—	—	—	—	Accessory Ignition Voltage	2	1.5	VT/YE	143	VI	—
3	0.35	BK/WH	1851	II	—	Signal Ground	3	0.35	BK/WH	1851	V	—
4	0.35	D-BU	2060	II	—	Auxiliary Detection Signal	4	0.35	D-BU	2060	V	—
5	0.35	BK	2550	II	—	Ground	5	0.35	BK	2550	V	—
6	0.35	WH	6816	II	—	Indicator Dimming Control	6	0.5	WH	6816	V	—
7	—	—	—	—	—	Accessory Ignition Voltage	7	0.35	VT/YE	43	V	—
8	0.35	VT/GN	1739	II	—	Run/Crank Ignition 1 Voltage	8	0.5	VT/GN	1739	V	—
9	0.75	BK	1850	I	—	Ground	9	0.35	BK	1850	V	—
10	0.35	GN/YE	7531	II	—	Local Interconnect Network Serial Data Bus 9	10	0.35	GN/YE	7531	V	—
11	0.5	GN/WH	7527	II	—	Local Interconnect Network Serial Data Bus 5	11	0.5	GN/WH	7527	V	—
		D-BU	3554	II	—	Passive Start Interior			D-BU	3554	V	—

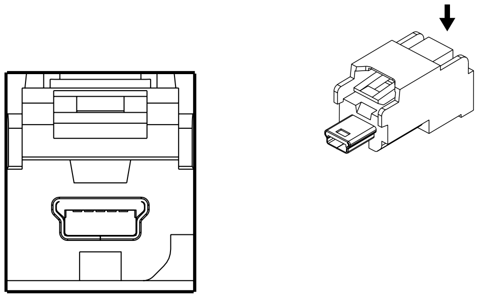
12	0.35					Antenna 2 Signal Hi	12	0.35				
13	0.5	BARE	5842	II	—	Auxiliary Audio Screen 2	13	0.5	BARE	5842	V	—
14	0.35	VT	5843	II	—	Auxiliary Audio Common Signal	14	0.35	VT	5843	V	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.35	GN/WH	3355	II	—	Left Rear Seat Audio Headphone Signal	16	0.35	GN/WH	3355	V	—
17	0.5	BARE	3354	II	—	Rear Seat Audio Headphone Low Reference	17	0.5	BARE	3354	V	—
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	1.5	RD/WH	1040	IV	—	Battery Positive Voltage	20	1.5	RD/WH	1040	VI	—
21	0.5	VT/BK	739	III	—	Run/Crank Ignition 1 Voltage Run/Crank Ignition 1 Voltage	21	0.5	VT/BK	739	VI	—
22	1.5	BK	1050	IV	—	Ground	22	1.5	BK	1050	VI	—
23	2.5	BK	1050	IV	—	Ground	23	2.5	BK	1050	VI	—
24	0.75	RD/VT	340	I	—	Battery Positive Voltage	24	0.75	RD/VT	340	V	—

25	0.5	VT/BN	300	II	—	Run Ignition 3 Voltage	25	0.5	VT/BN	300	V	—
26	0.35	D-BU/BN	6807	II	—	DC To AC Inverter Control	26	0.35	D-BU/BN	6807	V	—
27	0.35	RD/GY	2840	II	—	Battery Positive Voltage	27	0.35	RD/GY	2840	V	—
28	0.5	WH/BN	6815	II	—	Inadvertent Power Control	28	0.5	WH/BN	6815	V	—
29	0.35	GN	4512	II	—	Wireless Charging System Charge Indicator Control	29	0.35	GN	4512	V	—
30	0.35	GN/GY	3277	II	—	Vehicle Anti-Theft System Immobilizer Low Reference	30	0.35	GN/GY	3277	V	—
31	0.35	GN/VT	7533	II	—	Local Interconnect Network Serial Data Bus 11	31	0.35	GN/VT	7533	V	—
32	0.35	GY/BK	3276	II	—	Vehicle Anti-Theft System Immobilizer Control	32	0.35	GY/BK	3276	V	—
33	0.35	GY/BK	3555	II	—	Passive Start Interior Antenna 2 Signal Lo	33	0.35	GY/BK	3555	V	—
34	0.35	GN	5841	II	—	Right Auxiliary Audio Signal 2	34	0.35	GN	5841	V	—
35	0.35	GY	5839	II	—	Left Auxiliary Audio Signal 2	35	0.35	GY	5839	V	—
36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—

36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—
37	0.35	BN/GY	3357	II	—	Right Rear Seat Audio Headphone Signal	37	0.35	BN/GY	3357	V	—
38	0.35	D-BU/VT	3356	II	—	Rear Seat Audio Headphone Common Signal	38	0.35	D-BU/VT	3356	V	—
39 - 40	—	—	—	—	—	Not Occupied	39 - 40	—	—	—	—	—
41	0.35	YE	6817	III	—	LED Backlight Dimming Control LED Backlight Dimming Control	41	0.5	YE	6817	VI	—
42	0.75	RD/VT	340	III	—	Battery Positive Voltage Battery Positive Voltage	42	0.75	RD/VT	340	VI	—

X301 Instrument Panel Harness USB to Floor console Harness USB (D07/DCK with U42)





Connector Part Information

Harness Type: Floor Console USB

OEM Connector: 13584760

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 5-Way F 2.0 Mini-B USB Type (BK)

Connector Part Information

Harness Type: Instruent Panel USB

OEM Connector: 13584750

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 5-Way M 2.0 Mini-B USB Type (BK)

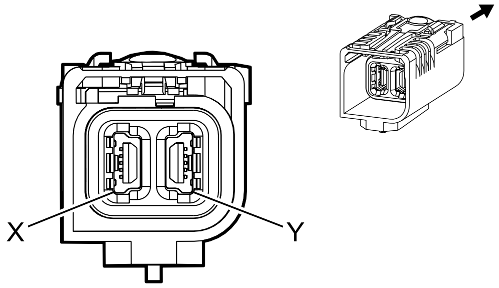
Terminal Part Information

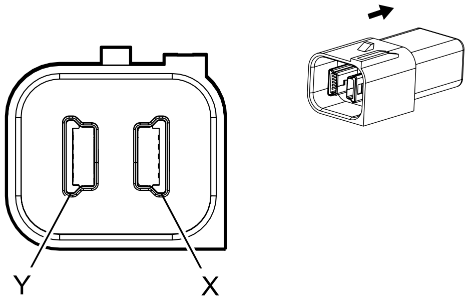
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X301 Instrument Panel Harness USB to Floor console Harness USB (D07/DCK with U42)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK with U42)





Connector Part Information

Harness Type: Floor Console

OEM Connector: 13586249

Service Connector: Service by Harness — See Part Catalog

Description: 2-Way M 2.0 Mini B USB Type (GY)

Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 13586190

Service Connector: Service by Harness — See Part Catalog

Description: 2-Way F 2.0 Mini B USB Type (GY)

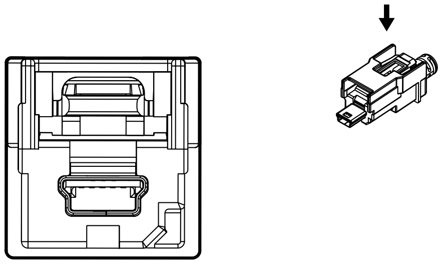
Terminal Part Information

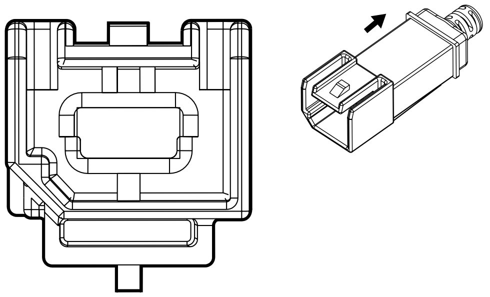
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK with U42)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
X	—	USB	—	I	—	USB Serial Data	X	—	USB	—	I	—
Y	—	USB	—	I	—	USB Serial Data	Y	—	USB	—	I	—

X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK without U42)





Connector Part Information

Harness Type: Floor Console USB

OEM Connector: 13576672

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way M 2.0 Mini B USB Type (GY)

Connector Part Information

Harness Type: Instrument Panel USB

OEM Connector: 13578976

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way F 2.0 Mini B USB Type (BK)

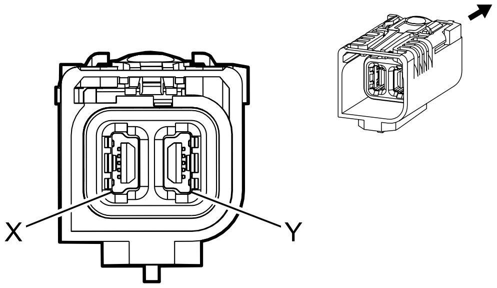
Terminal Part Information

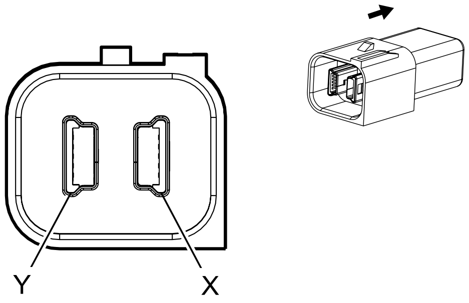
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X302 Floor Console Harness USB to Instrument Panel Harness USB (D07/DCK without U42)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X303 Floor Console Extension Harness USB to Instrument Panel Harness USB (D07/DCK with U42)





Connector Part Information

Harness Type: Instrument Panel USB

OEM Connector: 13586195

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 10-Way F 2.0 Mini-B USB Type (BK)

Connector Part Information

Harness Type: Floor Console Extension USB

OEM Connector: 13586193

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 10-Way M 2.0 Mini-B USB Type (BK)

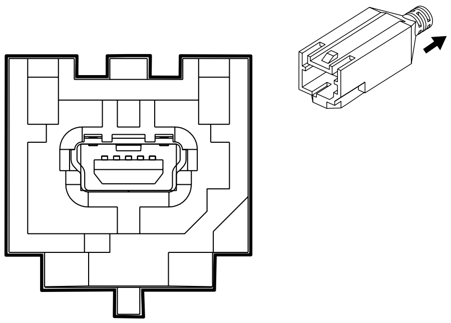
Terminal Part Information

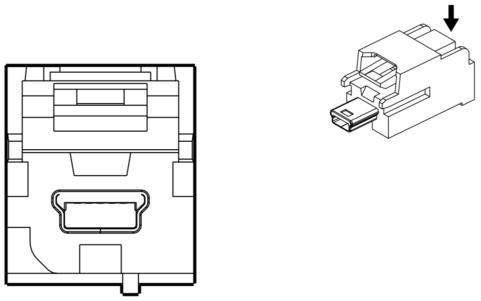
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X303 Floor Console Extension Harness USB to Instrument Panel Harness USB (D07/DCK with U42)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X304 Body Harness USB to Center Seat Harness USB (AZ3)





Connector Part Information

Harness Type: Body USB

OEM Connector: 13925321

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way F 2.0 Mini B USB Type (BK)

Connector Part Information

Harness Type: Center Seat USB

OEM Connector: 13925322

Service Connector: Service by Harness — See Part Catalog

Description: 5-Way M 2.0 Mini B USB Type (GY)

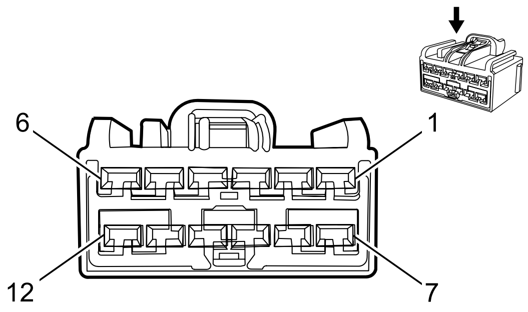
Terminal Part Information

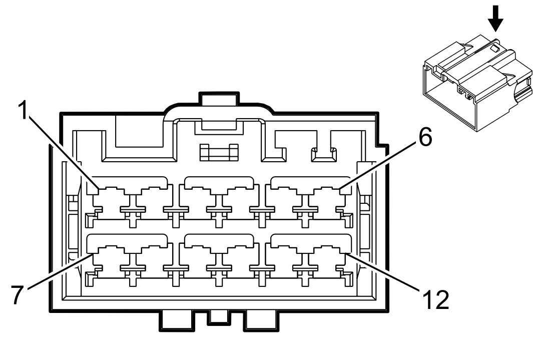
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

X304 Body Harness USB to Center Seat Harness USB (AZ3)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X305 Instrument Panel Harness to Instrument Panel Extension Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10846814

Service Connector: 13580444

Description: 12-Way F 2.8 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Instrument Panel Extension

OEM Connector: 10846810

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M (L-GY)

Terminal Part Information

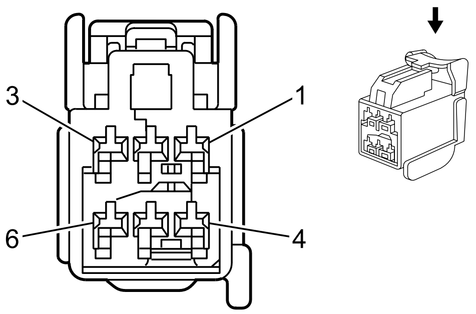
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575838	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13575839	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
III	13575839	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IV	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	19301761	J-35616-35 (VT)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

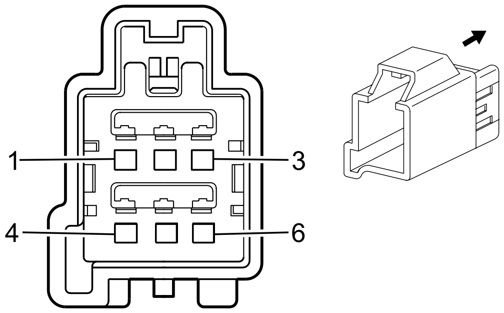
X305 Instrument Panel Harness to Instrument Panel Extension Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—

2	0.75 1.5	BK BK	5683 5683	IV III	— —	120 V AC Phase A 120 V AC Phase A	2	1.5	BK	5683	VI	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	2.5 2.5	RD/GY RD/GY	4140 4140	V II	— —	Battery Positive Voltage Battery Positive Voltage	6	2.5	RD/GY	4140	VI	—
7	0.75 1.5	RD RD	5684 5684	IV III	— —	120 V AC Phase B 120 V AC Phase B	7	1.5	RD	5684	VI	—
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	BARE	514	I	—	Low Reference	10	0.35	BARE	514	VI	—
11	2.5 2.5	BK BK	1050 1050	V II	— —	Ground Ground	11	2.5	BK	1050	VI	—
12	0.35 0.35	D-BU/BN D-BU/BN	6807 6807	IV I	— —	DC To AC Inverter Control DC To AC Inverter Control	12	0.35	D-BU/BN	6807	VI	—

X306 Instrument Panel Harness to Floor Console Harness





Connector Part Information

Harness Type: Instrument Panel

OEM Connector: 10846805

Service Connector: 89046849

Description: 6-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Floor Console

OEM Connector: 10846804

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 1.5 Series (L-GY)

Terminal Part Information

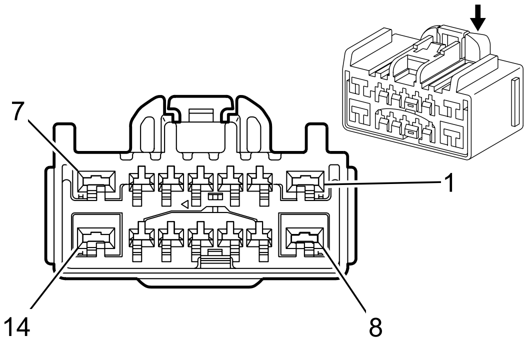
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

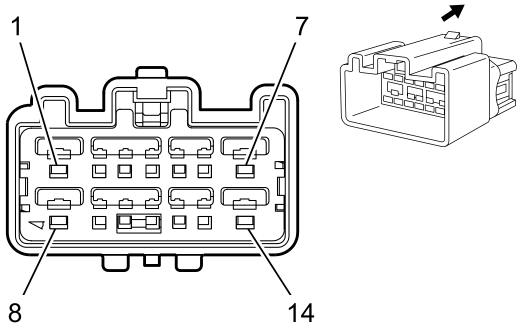
X306 Instrument Panel Harness to Floor Console Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	5683	II	—	120 V AC Phase A 120 V AC Phase A	1	0.75	BK	5683	IV	—

2	0.75	RD	5684	II	—	120 V AC Phase B	2	0.75	RD	5684	IV	—
						120 V AC Phase B						
3	0.5	BARE	514	I	—	Low Reference	3	0.5	BK/WH	514	III	—
						Low Reference			BK/WH	514	IV	—
								0.5				
4 - 6	—	—	—	—	—	Not Occupied	4 - 6	—	—	—	—	—

X307 Floor Console Harness to Floor Console Extension Harness





Connector Part Information

Harness Type: Floor Console

OEM Connector: 15452737

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F 1.5, 2.8 Series (BK)

Connector Part Information

Harness Type: Floor Console Harness Extension

OEM Connector: 15452738

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way M 1.5, 2.8 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

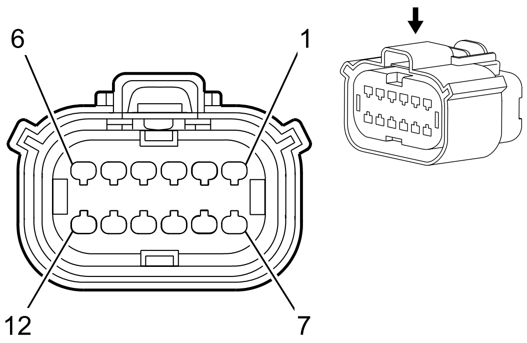
X307 Floor Console Harness to Floor Console Extension Harness

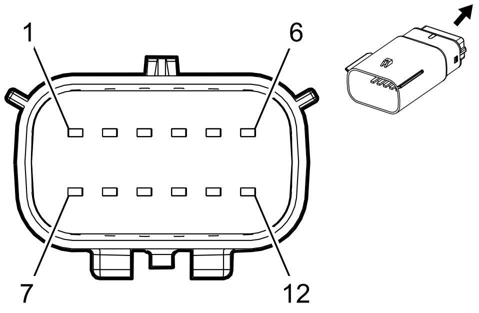
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	RD/WH	1040	II	—	Battery Positive Voltage	1	1.5	RD/WH	1040	IV	—

2	0.35	RD/GY	2840	I	—	Battery Positive Voltage	2	0.35	RD/GY	2840	III	—
3	0.5	GN/WH	7527	I	—	Local Interconnect Network Serial Data Bus 5	3	0.35	GN/WH	7527	III	—
4	0.35	D-BU	2060	I	—	Auxiliary Detection Signal	4	0.35	D-BU	2060	III	—
5	0.5	YE	6817	I	—	LED Backlight Dimming Control	5	0.5	YE	6817	III	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.75	RD/VT	340	II	—	Battery Positive Voltage	7	0.75	RD/VT	340	IV	—
8	1.5	BK	1050	II	—	Ground	8	1.5	BK	1050	IV	—
9	0.35	BK	1850	I	—	Ground	9	0.35	BK	1850	III	—
10	0.35 0.5	GN BK	5841 1050	I I	-DCK X88/Z88	Right Auxiliary Audio Signal 2 Ground	10	0.35 0.5	GN BK	5841 1050	III III	-DCK X88/Z88
11	0.35 0.5	GY WH	5839 6816	I I	-DCK X88/Z88	Left Auxiliary Audio Signal 2 Indicator Dimming Control	11	0.35 0.5	GY WH	5839 6816	III III	-DCK X88/Z88

12	0.35 0.35	VT BN	5843 6532	I I	-DCK X88/Z88	Auxiliary Audio Common Signal Power Rear Compartment Lid On/Off Control	12	0.35 0.35	VT BN	5843 6532	III III	-DCK X88/Z88
13	0.5 0.35	BK GY/BK	5842 2546	I I	-DCK X88/Z88	Auxiliary Audio Screen 2 Rear Steering Axle Control Motor Control Phase B	13	0.5 0.35	BK GY/BK	5842 2546	III III	-DCK X88/Z88
14	0.35	BK	2550	II	—	Ground	14	0.35	BK	2550	IV	—

X308 Body Harness to Rear Seat Harness (X88/Z88)





Connector Part Information

Harness Type: Body

OEM Connector: 13653762

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Rear Seat

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M

Terminal Part Information

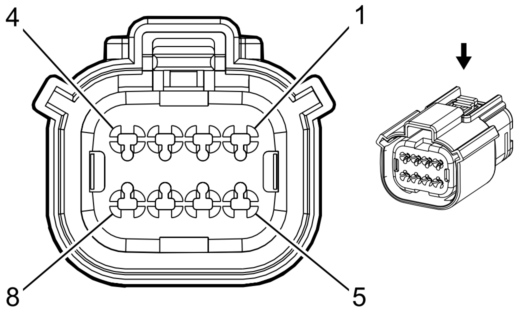
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Available	No Tool Required	Not Available	Not Required	Not Required	Not Required	Not Required
II	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

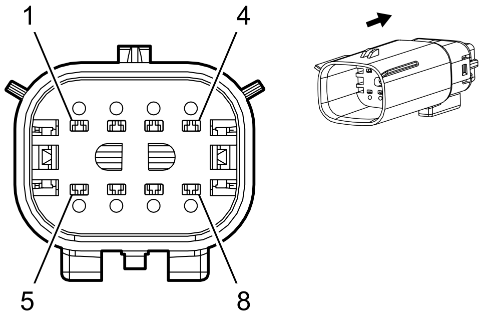
X308 Body Harness to Rear Seat Harness (X88/Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	RD/GN	5140	I	—	Battery Positive Voltage	1	0.75	RD/GN	5140	II	—
2	0.75	RD/GN	6140	I	—	Battery Positive Voltage	2	0.75	RD/GN	6140	II	—

2	0.75						2	0.75				
3	0.75	GN/BN	2296	I	—	Right Rear Heated Seat Cushion Element Control	3	0.75	GN/BN	2296	II	—
4	0.5	GN/BU	6133	I	—	Local Interconnect Network Serial Data Bus 2	4	0.5	GN/BU	6133	II	—
5	0.75	RD/BU	1240	I	—	Battery Positive Voltage	5	0.75	RD/BU	1240	II	—
6	0.5	GN	6808	I	—	Left Rear Seat Fold Tumble Control	6	0.5	GN	6808	II	—
7	0.75	GN/BK	2297	I	—	Right Rear Heated Seat Cushion Element Low Reference	7	0.75	GN/BK	2297	II	—
8	0.75	BK	1150	I	—	Ground	8	0.75	BK	1150	II	—
9	0.5	BU/GN	2300	I	—	Right Rear Heated Seat Sensor Signal	9	0.5	BU/GN	2300	II	—
10	0.5	BK/GY	2301	I	—	Right Rear Heated Seat Sensor Low Reference	10	0.5	BK/GY	2301	II	—
11	—	—	—	I	—	—	11	—	—	—	III	—
12	—	—	—	I	—	—	12	—	—	—	III	—

X308 Body Harness to Rear Seat Harness





Connector Part Information

Harness Type: Body

OEM Connector: 13654393

Service Connector: 13577527

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Rear Seat

OEM Connector: 33482-0801

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

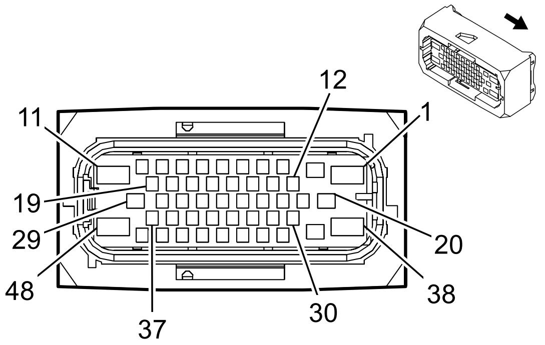
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

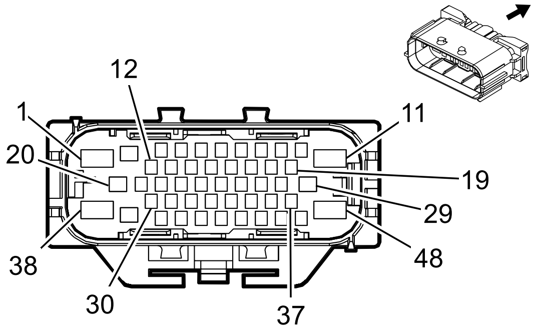
X308 Body Harness to Rear Seat Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	RD/GN	5140	I	—	Battery Positive Voltage	1	0.75	RD/GN	5140	II	—
2	0.75	RD/GN	6140	I	—	Battery Positive Voltage	2	0.75	RD/GN	6140	II	—

3	0.75	GN/BN	2296	I	—	Right Rear Heated Seat Cushion Element Control	3	0.75	GN/BN	2296	II	—
4	0.5	GN/D-BU	6133	I	—	Local Interconnect Network Serial Data Bus 2	4	0.35	GN/BU	6133	II	—
5	0.75	RD/D-BU	1240	I	—	Battery Positive Voltage	5	0.75	RD/BU	1240	II	—
6	0.5	GN	6808	I	—	Left Rear Seat Fold Tumble Control	6	0.5	GN	6808	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.75	BK	1150	I	—	Ground	8	0.75	BK	1150	II	—

X310 Driver Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)





Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509611

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: Not Available

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

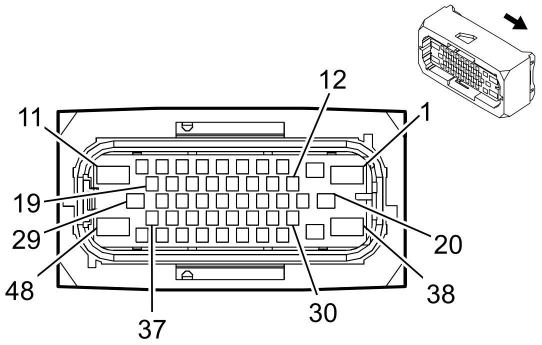
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
III	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

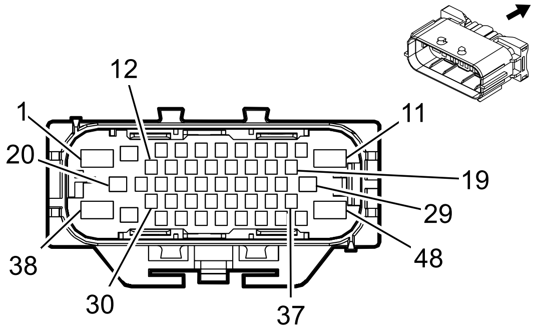
X310 Driver Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 4	—	—	—	—	—	Not Occupied	1 - 4	—	—	—	—	—
5	0.35	OG/GN	5055	I	—	Driver Seat Position Switch Signal	5	0.35	OG/GN	5055	II	—

6	0.35	OG/BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	II	—
7	0.35	BK/OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	II	—
8 - 23	—	—	—	—	—	Not Occupied	8 - 23	—	—	—	—	—
24	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	24	0.35	GN/OG	3069	III	—
25	0.5	YE/OG	3482	I	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	III	—
26 - 32	—	—	—	—	—	Not Occupied	26 - 32	—	—	—	—	—
33	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	33	0.35	OG/BU	3068	III	—
34	0.5	OG/YE	3481	I	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	3481	III	—
35 - 48	—	—	—	—	—	Not Occupied	35 - 48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)





Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509588

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-19 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required
V	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VI	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VII	Not Required	J-35616-32 (OR)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VIII	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IX	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
X	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X310 Driver Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)

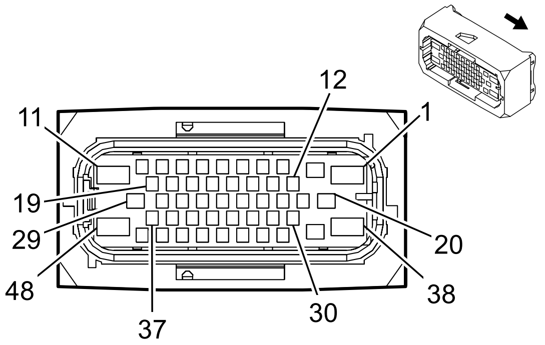
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/YE	5040	III	—	Battery Positive Voltage	2	2.5	RD/YE	5040	IX	—
3	1.5	YE	5129	I	—	Adjustable Pedal Actuator Rearward Control	3	1.5	YE	5129	V	—
4	1.5	GN/VT	5130	I	—	Adjustable Pedal Actuator Forward Control	4	1.5	GN/VT	5130	V	—
5	0.35	OG/GN	5055	I	—	Driver Seat Position Switch Signal	5	0.35	OG/GN	5055	IV	—
6	0.35	OG/BN	238	I	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	IV	—
7	0.35	BK/OG	1363	I	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	IV	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	GN/GY	5286	I	—	Adjustable Pedal Switch Forward Signal	9	0.35	GN/GY	5286	V	—
10	0.35	WH/GY	5285	I	—	Adjustable Pedal Switch Rearward Signal	10	0.35	WH/GY	5285	V	—
11	4	BK	1150	II	—	Ground	11	4	BK	1150	VII	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—

13	0.5	WH/RD	6207	I	—	Memory Sensor High Reference	13	0.35	WH/RD	6207	V	—
14	0.35	BU	5952	I	—	Adjustable Pedal Position Sensor Brake Signal	14	0.35	BU	5952	V	—
15	0.5	BK/GY	6206	I	—	Memory Sensor Low Reference	15	0.35	BK/GY	6206	V	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	17	0.5	GN/WH	7530	IV	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	19	0.35	GN/VT	5906	IV	—
20 - 21	—	—	—	—	—	Not Occupied	20 - 21	—	—	—	—	—
22	0.75	BN/BK	2078	I	—	Driver Heated Seat Element Low Reference	22	0.75	BN/BK	2078	VI	—
23	0.75	RD/BN	1140	I	—	Battery Positive Voltage	23	0.5	RD/BN	1140	V	—
24	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	24	0.35	GN/OG	3069	VI	—
25	0.5	YE/OG	3482	I	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	VI	—
26	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	26	0.5	GN	5060	X	—

27	—	—	—	—	—	Not Occupied	27	—	—	—	—	—
28	0.5	BN/YE	2080	I	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/YE	2080	IV	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	BU	2425	I	—	Driver Heated Back NTC Signal	30	0.5	BU	2425	IV	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.5	YE/GY	2079	I	—	Driver Heated Seat NTC Signal	32	0.5	YE/GY	2079	IV	—
33	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	33	0.35	OG/BU	3068	VI	—
34	0.5	OG/YE	3481	I	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	3481	VI	—
35	0.35	GN/BU	614	I	—	Memory Seat Switch Set Signal	35	0.35	BU/GN	614	VIII	—
36	0.75	BN	2432	I	—	Driver Heated Back Element Control	36	0.75	BN	2432	VI	—
37	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	37	0.75	BN/VT	2077	VI	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	BK/BU	5978	I	—	Memory Switch Low Reference	40	0.35	BK/BU	5978	VIII	—
41	0.35	WH	615	I	—	Memory Seat Switch Signal 1	41	0.35	WH	615	VIII	—

42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—
43	0.5	VT	4106	I	—	Center Side Impact Module Low Control	43	0.35	VT	4106	VI	—
44	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	44	0.35	BN/WH	4107	VI	—
45	—	—	—	—	—	Not Occupied	45	—	—	—	—	—
46	0.35	GY	157	I	—	Interior Lamp Control	46	0.35	WH/YE	7557	IV	—
47	0.75	RD/GN	5140	I	—	Battery Positive Voltage	47	0.75	RD/GN	5140	IX	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness Z75+ULT



—

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 15509590

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: —

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-19 (BK)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required
V	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VI	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VII	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VIII	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IX	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
X	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
XI	Not Required	J-35616-32 (OR)	No Tool Required	Not Required	Not Required	Not Required	Not Required
XII	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X310 Driver Seat Cushion Harness to Body Harness Z75+ULT

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—

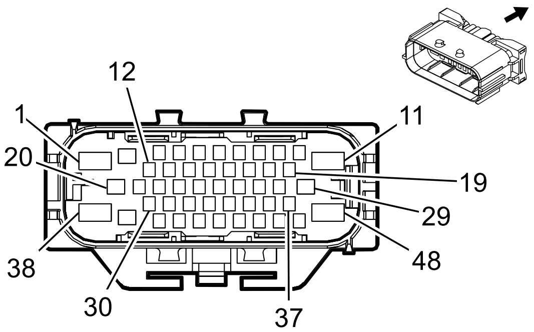
2	2.5	RD/YE	5040	IX	—	Battery Positive Voltage	2	2.5	RD/YE	5040	V	—
3	1.5	YE	5129	VIII	—	Adjustable Pedal Actuator Rearward Control	3	1.5	YE	5129	II	—
4	1.5	GN/VT	5130	VIII	—	Adjustable Pedal Actuator Forward Control	4	1.5	GN/VT	5130	II	—
5	0.35	OG/GN	5055	VIII	—	Driver Seat Position Switch Signal	5	0.35	OG/GN	5055	I	—
6	0.35	OG/BN	238	VIII	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	I	—
7	0.35	BK/OG	1363	VIII	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	I	—
8	0.5	RD/BN	2240	VIII	—	Battery Positive Voltage	8	0.5	RD/BN	2240	II	—
9	0.35	GN/GY	5286	VIII	—	Adjustable Pedal Switch Forward Signal	9	0.35	GN/GY	5286	II	—
10	0.35	WH/GY	5285	VIII	—	Adjustable Pedal Switch Rearward Signal	10	0.35	WH/GY	5285	II	—
11	4	BK	1150	VI	—	Ground	11	4	BK	1150	XI	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	WH/RD	6207	VIII	—	Memory Sensor High Reference	13	0.35	WH/RD	6207	II	—

14	0.35	BU	5952	VIII	—	Adjustable Pedal Position Sensor Brake Signal	14	0.35	BU	5952	II	—
15	0.5	BK/GY	6206	VIII	—	Memory Sensor Low Reference	15	0.35	BK/GY	6206	II	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	GN/WH	7530	VIII	—	Local Interconnect Network Serial Data Bus 8	17	0.5	GN/WH	7530	I	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	GN/VT	5906	VIII	—	Driver Seat Vent Motor Control 1	19	0.35	GN/VT	5906	I	—
20 - 22	—	—	—	—	—	Not Occupied	20 - 22	—	—	—	—	—
23	0.75	RD/BN	1140	VIII	—	Battery Positive Voltage	23	0.5	RD/BN	1140	X	—
24	0.5	GN/OG	3069	VIII	—	Driver Side Impact Module Low Control	24	0.35	GN/OG	3069	III	—
25	0.5	YE/OG	3482	VIII	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	III	—
26	0.5	GN	5060	VIII	—	Low Speed GMLAN Serial Data	26	0.5	GN	5060	VII	—
27 - 32	—	—	—	—	—	Not Occupied	27 - 32	—	—	—	—	—
33	0.5	OG/BU	3068	VIII	—	Driver Side Impact Module High Control	33	0.35	OG/BU	3068	III	—
		OG/YE	3481	VIII	—	Driver Seat Belt Anchor			OG/YE	3481	III	—

34	0.5	OG/YE	5481	VIII	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	5481	III	—
35	0.35	GN/BU	614	VIII	—	Memory Seat Switch Set Signal	35	0.35	BU/GN	614	IV	—
36 - 39	—	—	—	—	—	Not Occupied	36 - 39	—	—	—	—	—
40	0.35	BK/BU	5978	VIII	—	Memory Switch Low Reference	40	0.35	BK/BU	5978	IV	—
41	0.35	WH	615	VIII	—	Memory Seat Switch Signal 1	41	0.35	WH	615	IV	—
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—
43	0.5	VT	4106	VIII	—	Center Side Impact Module Low Control	43	0.35	VT	4106	III	—
44	0.5	BN/WH	4107	VIII	—	Center Side Impact Module High Control	44	0.35	BN/WH	4107	III	—
45	—	—	—	—	—	Not Occupied	45	—	—	—	—	—
46	0.35	GY	157	VIII	—	Interior Lamp Control	46	0.35	WH/YE	7557	I	—
47	0.75	RD/GN	5140	VIII	—	Battery Positive Voltage	47	0.75	RD/GN	5140	XII	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X310 Driver Seat Cushion Harness to Body Harness Z75-ULT

—



Connector Part Information

Harness Type: Body

OEM Connector: Not Available

Service Connector: Pending

Description: —

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
V	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	13578881	J-35616-5 (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	19329756	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
IX	19331731	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
X	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
XI	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X310 Driver Seat Cushion Harness to Body Harness Z75-ULT

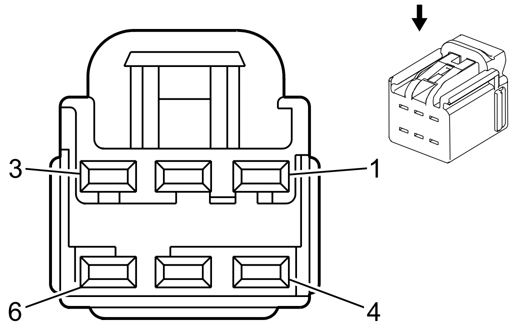
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
		RD/YE	5040	IV	—	Battery Positive Voltage			RD/YE	5040	VII	—

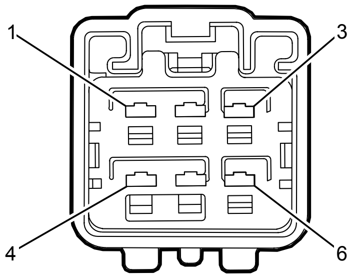
2	2.5						2	2.5				
3	1.5	YE	5129	II	—	Adjustable Pedal Actuator Rearward Control	3	1.5	YE	5129	IX	—
4	1.5	GN/VT	5130	II	—	Adjustable Pedal Actuator Forward Control	4	1.5	GN/VT	5130	IX	—
5	0.35	OG/GN	5055	II	—	Driver Seat Position Switch Signal	5	0.35	OG/GN	5055	X	—
6	0.35	OG/BN	238	II	—	Driver Seat Belt Switch Signal	6	0.35	OG/BN	238	X	—
7	0.35	BK/OG	1363	II	—	Driver Seat Belt Switch Low Reference	7	0.35	BK/OG	1363	X	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	GN/GY	5286	II	—	Adjustable Pedal Switch Forward Signal	9	0.35	GN/GY	5286	X	—
10	0.35	WH/GY	5285	II	—	Adjustable Pedal Switch Rearward Signal	10	0.35	WH/GY	5285	X	—
11	4	BK	1150	III	—	Ground	11	4	BK	1150	VIII	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	WH/RD	6207	II	—	Memory Sensor High Reference	13	0.35	WH/RD	6207	X	—
14	0.35	BU	5952	III	—	Adjustable Pedal Position Sensor Brake Signal	14	0.35	D-BU	5952	X	—

15	0.5	BK/GY	6206	II	—	Memory Sensor Low Reference	15	0.35	BK/GY	6206	X	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	GN/WH	7530	II	—	Local Interconnect Network Serial Data Bus 8	17	0.5	GN/WH	7530	V	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	GN/VT	5906	II	—	Driver Seat Vent Motor Control 1	19	0.35	GN/VT	5906	X	—
20 - 22	—	—	—	—	—	Not Occupied	20 - 22	—	—	—	—	—
23	0.75	RD/BN	1140	II	—	Battery Positive Voltage	23	2.5	RD/BN	1440	I	—
24	0.5	GN/OG	3069	II	—	Driver Side Impact Module Low Control	24	0.35	GN/OG	3069	XI	—
25	0.5	YE/OG	3482	II	—	Driver Seat Belt Anchor Pretensioner Low Control	25	0.35	YE/OG	3482	XI	—
26	0.5	GN	5060	II	—	Low Speed GMLAN Serial Data	26	0.5	GN	5060	V	—
27 - 32	—	—	—	—	—	Not Occupied	27 - 32	—	—	—	—	—
33	0.5	OG/BU	3068	II	—	Driver Side Impact Module High Control	33	0.35	OG/D-BU	3068	XI	—
34	0.5	OG/YE	3481	II	—	Driver Seat Belt Anchor Pretensioner High Control	34	0.35	OG/YE	3481	XI	—
		GN/BU	614	II	—	Memory Seat Switch			D-BU/GN	614	X	—

35	0.35	GN/BU	614	II	—	Memory Seat Switch Set Signal	35	0.35	D-BU/GN	614	X	—
36	0.75	BN	2432	II	—	Driver Heated Back Element Control	36	0.75	BN	2432	VI	—
37	0.75	BN/VT	2077	II	—	Driver Heated Seat Element Control	37	0.75	BN/VT	2077	VI	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	BK/BU	5978	II	—	Memory Switch Low Reference	40	0.35	BK/D-BU	5978	X	—
41	0.35	WH	615	II	—	Memory Seat Switch Signal 1	41	0.35	WH	615	X	—
42	—	—	—	—	—	Not Occupied	42	—	—	—	—	—
43	0.5	VT	4106	II	—	Center Side Impact Module Low Control	43	0.35	VT	4106	XI	—
44	0.5	BN/WH	4107	II	—	Center Side Impact Module High Control	44	0.35	BN/WH	4107	XI	—
45	—	—	—	—	—	Not Occupied	45	—	—	—	—	—
46	0.35	GY	157	II	—	Interior Lamp Control	46	0.35	WH/YE	7557	X	—
47	0.75	RD/GN	5140	II	—	Battery Positive Voltage	47	0.75	RD/GN	5140	I	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X311 Driver Seat Back Harness to Driver Seat Cushion Harness





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 7283-6466-40

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7282-6466-40

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M YESC Kaizen Series (L-GY)

Terminal Part Information

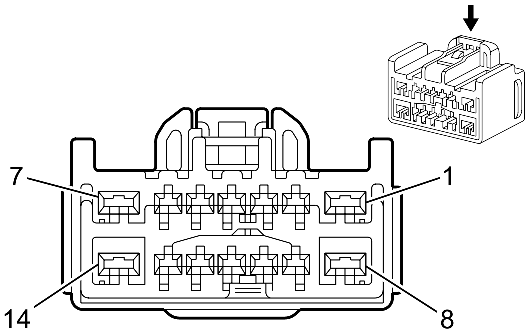
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

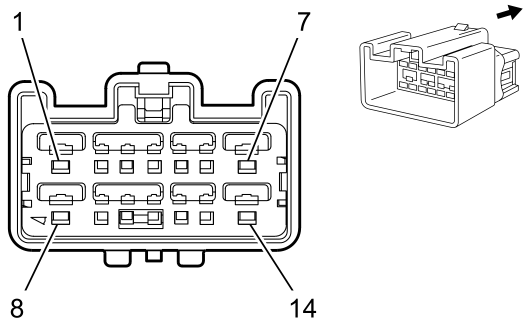
X311 Driver Seat Back Harness to Driver Seat Cushion Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35 0.75	WH/BK YE/BU	570 767	I I	— —	Driver Memory Seat Recline Motor Position Sensor Signal Driver Power Seat Lumbar Motor Down Control	1	0.5 1.5	WH/BK YE/BU	570 767	II II	— —

2	0.35 0.75	WH/RD YE/BN	3298 768	I I	— —	Memory Sensor High Reference 2 Driver Power Seat Lumbar Motor Up Control	2	0.35 1.5	WH/RD YE/BN	3298 768	II II	— —
3	0.75 1.5	BU BU	611 611	I I	— —	Driver Power Seat Lumbar Motor Forward Control Driver Power Seat Lumbar Motor Forward Control	3	1.5	BU	611	II	—
4	0.75 1.5	VT VT	610 610	I I	— —	Driver Power Seat Lumbar Motor Rearward Control Driver Power Seat Lumbar Motor Rearward Control	4	1.5	VT	610	II	—
5	1.5	GN/YE	276	I	—	Driver Power Seat Recline Motor Forward Control	5	1.5	GN/YE	276	II	—
6	1.5	BU/YE	277	I	—	Driver Power Seat Recline Motor Rearward Control	6	1.5	BU/YE	277	II	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75+ULT)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 7283-6447-70

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F 1.5, 2.8 Series (YE)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 7282-6447-70

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way M 1.5, 2.8 Series (YE)

Terminal Part Information

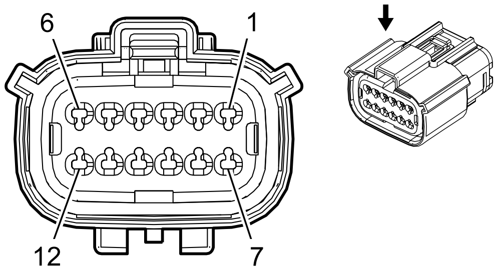
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

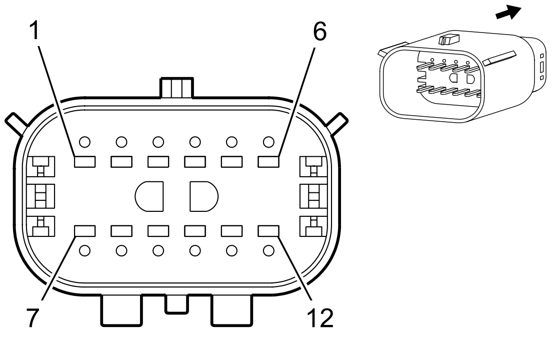
X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75+ULT)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	GN/YE	276	II	—	Driver Power Seat Recline Motor Forward Control	1	1.5	GN/YE	276	IV	—

2	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	2	0.5	OG/BU	3068	III	—
3	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	3	0.5	GN/OG	3069	III	—
4	0.5	VT	4106	I	—	Center Side Impact Module Low Control	4	0.5	VT	4106	III	—
5	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	5	0.5	BN/WH	4107	III	—
6	0.75	BK	1150	I	—	Ground	6	0.75	BK	1150	III	—
7	1.5	BU/YE	277	II	—	Driver Power Seat Recline Motor Rearward Control	7	1.5	BU/YE	277	IV	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.75	RD/GN	5140	I	—	Battery Positive Voltage	9	0.75	RD/GN	5140	III	—
10	0.35	GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	10	0.35	GN/VT	5906	III	—
11	0.35	WH/BK	570	I	—	Driver Memory Seat Recline Motor Position Sensor Signal	11	0.5	WH/BK	570	III	—
12	0.35	WH/RD	3298	I	—	Memory Sensor High Reference 2	12	0.35	WH/RD	3298	III	—
13 - 14	—	—	—	—	—	Not Occupied	13 - 14	—	—	—	—	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75-ULT)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 33472-1292

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 150 MX Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 33482-1336

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M 150 MX Series, Sealed (YE)

Terminal Part Information

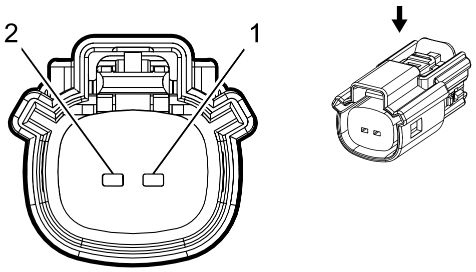
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

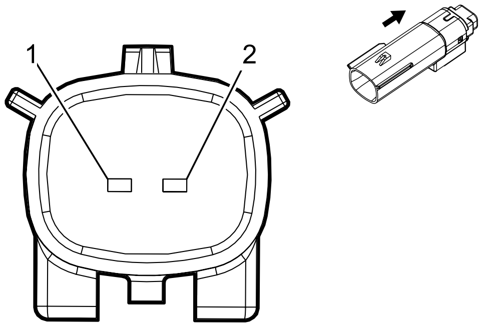
X312 Driver Seat Back Harness to Driver Seat Cushion Harness (Z75-ULT)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	1	0.5	OG/BU	3068	II	—
2	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	GN/OG	3069	II	—

3	0.5	VT	4106	I	—	Center Side Impact Module Low Control	3	0.5	VT	4106	II	—
4	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	4	0.5	BN/WH	4107	II	—
5	0.75	BK	1150	I	—	Ground	5	0.75	BK	1150	II	—
6	0.75	RD/GN	5140	I	—	Battery Positive Voltage	6	0.75	RD/GN	5140	II	—
7	0.35	GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	7	0.35	GN/VT	5906	II	—
8 - 10	—	—	—	—	—	Not Occupied	8 - 10	—	—	—	—	—
11	0.35	WH/BK	570	I	—	Driver Memory Seat Recline Motor Position Sensor Signal	11	0.5	WH/BK	570	II	—
12	0.35	WH/RD	3298	I	—	Memory Sensor High Reference 2	12	0.35	WH/RD	3298	II	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88-(AG1/A45/KQV)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 33471-0223

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 33481-0210

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 MX Series, Sealed (YE)

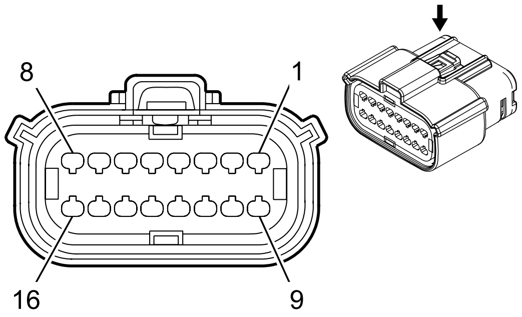
Terminal Part Information

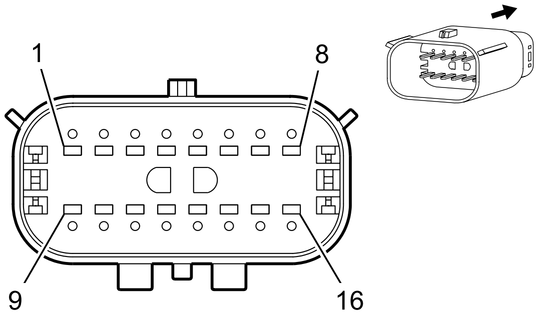
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88-(AG1/A45/KQV)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	1	0.5	OG/BU	3068	II	—
2	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	GN/OG	3069	II	—

X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88+(AG1/A45/KQV)





Connector Part Information

Harness Type: Driver Seat Back

OEM Connector: 33472-1886

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 150 MX Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Seat Cushion

OEM Connector: 33482-1777

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way M 150 MX Series, Sealed (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

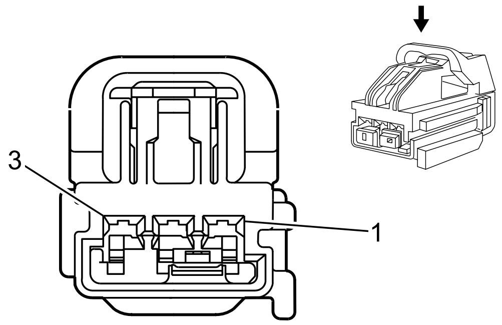
X312 Driver Seat Back Harness to Driver Seat Cushion Harness X88/Z88+(AG1/A45/KQV)

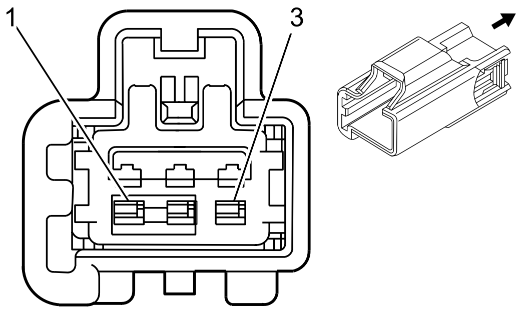
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/BU	3068	I	—	Driver Side Impact Module High Control	1	0.5	OG/BU	3068	II	—
2	0.5	GN/OG	3069	I	—	Driver Side Impact Module Low Control	2	0.5	GN/OG	3069	II	—

3	0.5	VT	4106	I	—	Center Side Impact Module Low Control	3	0.5	VT	4106	II	—
4	0.5	BN/WH	4107	I	—	Center Side Impact Module High Control	4	0.5	BN/WH	4107	II	—
5	0.75	BK	1150	I	—	Ground	5	0.75	BK	1150	II	—
6	0.75	BN	2432	I	—	Driver Heated Back Element Control	6	0.75	BN	2432	II	—
7	0.35	GN/VT	5906	I	—	Driver Seat Vent Motor Control 1	7	0.35	GN/VT	5906	II	—
8	0.5	BK/YE	2080	I	—	Driver Heated Seat NTC Low Reference	8	0.5	BN/YE	2080	II	—
9	0.75	BN/BK	2078	I	—	Driver Heated Seat Element Low Reference	9	0.5	BN/BK	2078	II	—
10	0.5	BU	2425	I	—	Driver Heated Back NTC Signal	10	0.5	BU	2425	II	—
11	0.75	RD/GN	5140	I	—	Battery Positive Voltage	11	0.75	RD/GN	5140	II	—
12	0.35	WH/BK	570	I	—	Driver Memory Seat Recline Motor Position Sensor Signal	12	0.5	WH/BK	570	II	—
13	0.35	WH/RD	3298	I	—	Memory Sensor High Reference 2	13	0.35	WH/RD	3298	II	—

14 - 16	—	—	—	—	—	Not Occupied	14 - 16	—	—	—	—	—

X313 Floor Console Extension Harness to Floor Console Harness





Connector Part Information

Harness Type: Floor Console Extension

OEM Connector: 10847008

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Floor Console

OEM Connector: 10846803

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way M 1.5 YESC Kaizen Series (L-GY)

Terminal Part Information

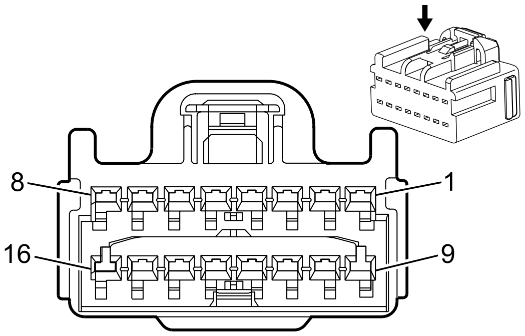
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

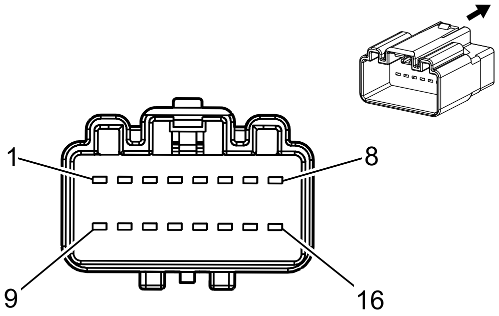
X313 Floor Console Extension Harness to Floor Console Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	VT/YE	43	II	—	Accessory Ignition Voltage	1	0.35	VT/YE	43	IV	—
						Accessory Ignition			VT/YE	43	III	—

						Voltage		0.35				
2	0.75	BK	1050	I	—	Ground	2	0.75	BK	1050	IV	—
3	0.35	GN	4512	II	—	Wireless Charging System Charge Indicator Control	3	0.35	GN	4512	IV	—
									GN	4512	III	—
						Wireless Charging System Charge Indicator Control		0.35				

X315 Headliner Harness to Body Harness





Connector Part Information

Harness Type: Headliner

OEM Connector: 10847013

Service Connector: 89047090

Description: 16-Way F 1.5 Kaizen Series (GN)

Connector Part Information

Harness Type: Body

OEM Connector: 13507433

Service Connector: 89047072

Description: 16-Way M 1.5 Kaizen Series (GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13575818	J-35616-3 (GY)	J-38125-553	Not Available	Not Available	Not Available	Not Available
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
IV	19301755	J-35616-41 (BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

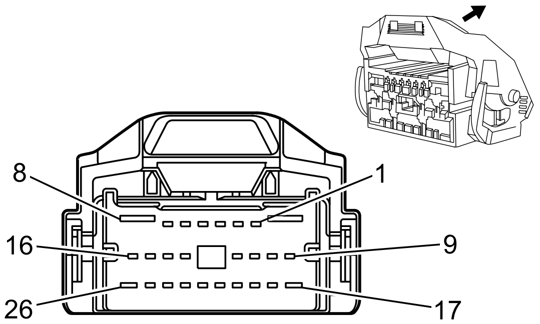
X315 Headliner Harness to Body Harness

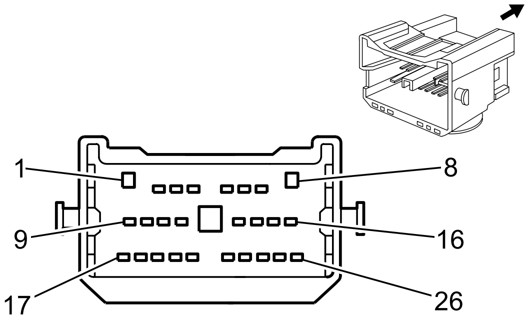
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	RD/D-BU	4540	I	—	Battery Positive Voltage	1	0.5	RD/D-BU	4540	III	—
2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—

2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
4	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	4	0.5	D-BU/VT	3813	III	—
5	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	5	0.5	WH	3811	III	—
6	0.5	GN/BN	6132	I	—	Local Interconnect Network Serial Data Bus 1	6	0.5	GN/BN	6132	III	—
7	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	7	0.5	D-BU/VT	3813	III	—
8	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	8	0.5	WH	3811	III	—
9	0.35	GY/VT	3808	I	—	Front Object Sensor Control 2 Front Object Sensor Control 2	9	0.35 0.35	GY/VT GY/VT	3808 3808	IV II	— —
10	0.35	GN/BK	3008	I	—	Noise Reduction Microphone 1 Low Reference	10	0.35	GN/BK	3008	IV	—
11	0.35	GN/WH	3005	I	—	Noise Reduction Microphone 1 Signal	11	0.35	GN/BN	3005	IV	—
12	0.35	D-BU/BK	3009	I	—	Noise Reduction Microphone 2 Low Reference	12	0.35	D-BU/BK	3009	IV	—
13	0.35	D-BU/YE	3006	I	—	Noise Reduction Microphone 2 Signal	13	0.35	D-BU/YE	3006	IV	—

14	0.35	GY/BN	3010	I	—	Noise Reduction Microphone 3 Low Reference	14	0.35	GY/BN	3010	IV	—
15	0.35	GY/D-BU	3007	I	—	Noise Reduction Microphone 3 Signal	15	0.35	GY/D-BU	3007	IV	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—

X316 Headliner Harness to Overhead Console Harness





Connector Part Information

Harness Type: Headliner

OEM Connector: 15518265

Service Connector: 13587877

Description: 26-Way F 1.5, 2.8, 6.3 Series (BK)

Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13536441

Service Connector: 88952802

Description: 26-Way M 1.5, 2.8, 6.3 YESC Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575850	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13578891	J-35616-2A (GY)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
III	13582322	J-35616-35 (VT)	J-38125-11A	7116-4110-02	Yazaki 9	E	C
IV	13582322	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
V	Not Required	J-35616-3 (GY)	J-38125-217	Not Required	Not Required	Not Required	Not Required
VI	Not Required	J-35616-3 (GY)	J-38125-553	Not Required	Not Required	Not Required	Not Required
VII	Not Required	J-35616-5 (PU)	J-38125-212	Not Required	Not Required	Not Required	Not Required

X316 Headliner Harness to Overhead Console Harness

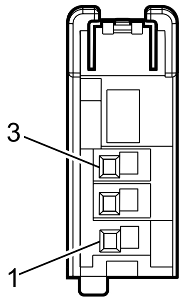
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option

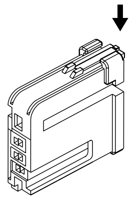
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	GN	6112	II	—	Power Lift Gate On/Off Switch Signal	2	0.35	GN	6112	V	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	BK	1050	II	—	Ground	4	0.5	BK	1050	V	—
5	0.35	GY/GN	328	II	—	Interior Lamp Defeat Switch Signal	5	0.35	GY/GN	328	V	—
6	0.35	GY/D-BU	156	II	—	Courtesy Lamp Switch Signal	6	0.35	GY	156	V	—
7	0.5	WH/BN	6815	II	—	Inadvertent Power Control Inadvertent Power Control	7	0.5 0.5	WH/BN WH/BN	6815 6815	V VI	— —
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	VT/GN	7558	II	—	LED Ambient Lighting Control 2	9	0.35	VT/GN	7558	V	—
10	0.5	YE	6817	II	—	LED Backlight Dimming Control	10	0.5	YE	6817	V	—
11	0.35	VT/BK	1139	II	—	Run/Crank Ignition 1 Voltage	11	0.35	VT/WH	1139	V	—
12	0.35	VT/WH	5234	II	—	Passenger Seat Belt Indicator Control	12	0.35	VT/WH	5234	V	—

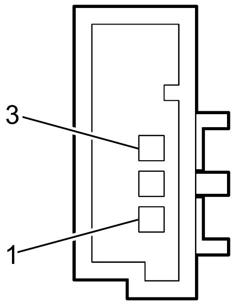
13	0.35	D-BU	2307	II	—	Passenger Air Bag On Indicator Control	13	0.35	D-BU	2307	V	—
14	0.35	GN/RD	2308	II	—	Passenger Air Bag Off Indicator Control	14	0.35	GN	2308	V	—
15	0.35	RD/D-BU	4540	II	—	Battery Positive Voltage	15	0.35	RD/D-BU	4540	V	—
16	0.5	GN/BN	6132	II	—	Local Interconnect Network Serial Data Bus 1	16	0.5	GN/BN	6132	V	—
17	0.75	RD/YE	240	IV	—	Battery Positive Voltage	17	0.35	RD/YE	240	VII	—
18	0.35	GY/BK	6113	II	—	Rear Lift Gate Open/Close Switch Signal	18	0.35	GY/BK	6113	VI	—
19 - 20	—	—	—	—	—	Not Occupied	19 - 20	—	—	—	—	—
21	0.5	GY	157	II	—	Interior Lamp Control Interior Lamp Control	21	0.5 0.5	GY GY	157 157	V VI	— —
22	0.35	GN/D-BU	2514	II	—	Keypad Signal	22	0.35	GN/D-BU	2514	V	—
23	0.75	VT/YE	43	I	—	Accessory Ignition Voltage	23	0.35	VT/YE	43	V	—
24	0.35	GN/BK	2515	II	—	Keypad Control	24	0.35	GN/BK	2515	V	—

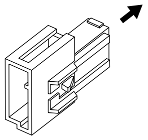
25	0.35	YE/BN	2516	II	—	Keypad Green LED Control	25	0.35	YE/BN	2516	V	—
26	0.35	BN/WH	2517	III	—	Keypad Red LED Control	26	0.35	BN/WH	2517	VII	—

X318 Rain Sensor Jumper Harness to Headliner Harness









Connector Part Information

Harness Type: Rain Sensor Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F

Connector Part Information

Harness Type: Headliner

OEM Connector: 13646861

Service Connector: 13579450

Description: 3-Way M 0.64 Series (BK)

Terminal Part Information

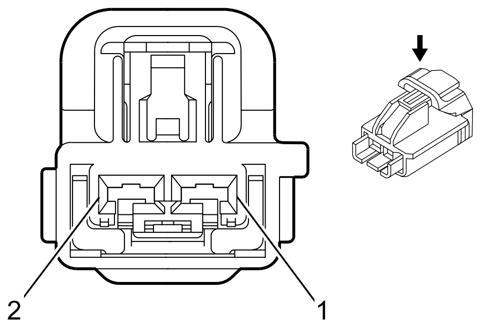
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-65B (LT BU)	J-38125-212	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-65B (LT BU)	J-38125-217	Not Required	Not Required	Not Required	Not Required

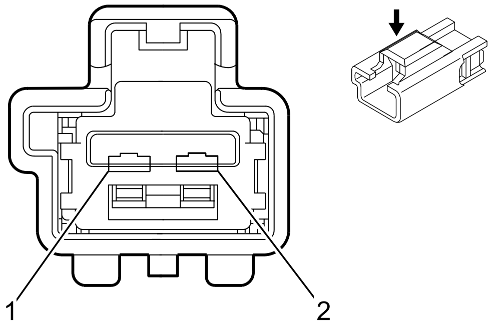
X318 Rain Sensor Jumper Harness to Headliner Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	RD/D-BU	840	I	—	Battery Positive Voltage	1	0.35	RD/D-BU	840	II	—
2	0.5	GN/BN	6132	I	—	Local Interconnect	2	0.5	GN/BN	6132	III	—

2	0.5					Network Serial Data Bus 1	2	0.5				
3	0.35	BK	1050	I	—	Ground	3	0.35	BK	1050	II	—

X319 A-Pillar Harness to Headliner Harness





Connector Part Information

- Harness Type: A-Pillar
- OEM Connector: —
- Service Connector: Service by Harness - See Part Catalog
- Description: 2-Way F

Connector Part Information

- Harness Type: Headliner
- OEM Connector: 10846812
- Service Connector: 88988510
- Description: 2-Way M YESC Kaizen Series (L-GY)

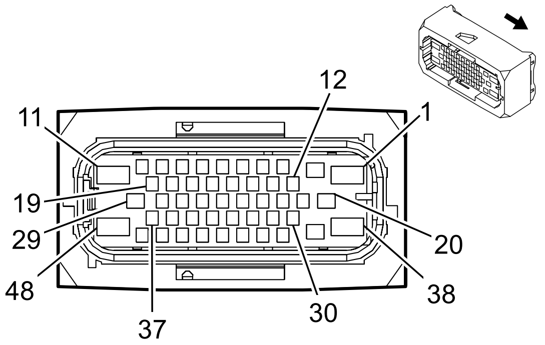
Terminal Part Information

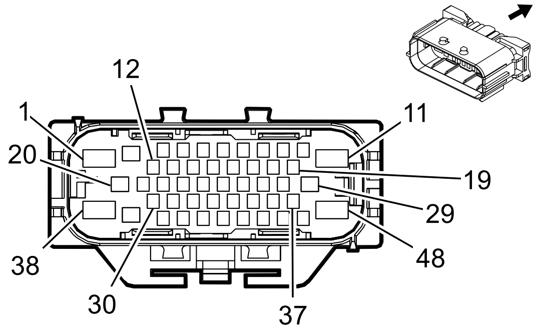
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X319 A-Pillar Harness to Headliner Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD	3140	I	—	Battery Positive Voltage	1	2.5	RD/GN	3140	II	—
2	2.5	BK	1050	I	—	Ground	2	2.5	BK	1050	II	—

X320 Passenger Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 15509590

Service Connector: Pending

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

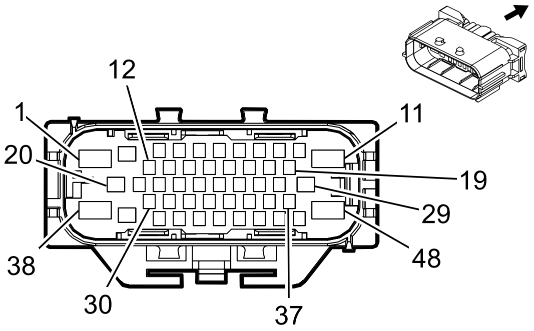
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VIII	Not Required	J-35616-32 (OR)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IX	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

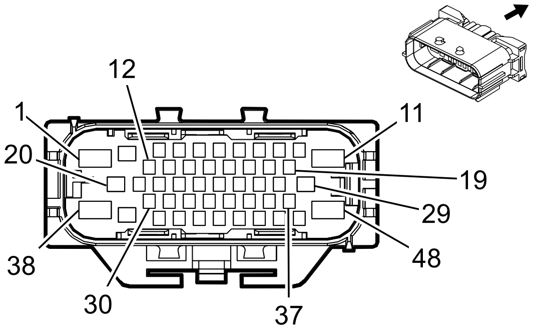
X320 Passenger Seat Cushion Harness to Body Harness X88/Z88-(AG1/A45/KQV)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BR	1440	III	—	Battery Positive Voltage	2	2.5	RD/BN	1440	IX	—
3 - 4	—	—	—	—	—	Not Occupied	3 - 4	—	—	—	—	—
5	0.35	OG/BU	5056	I	—	Passenger Seat Position Switch Signal	5	0.35	OG/BU	5056	V	—
6	0.35	OG/VT	1362	I	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	V	—
7	0.35	BK/OG	1361	I	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	V	—
8 - 10	—	—	—	—	—	Not Occupied	8 - 10	—	—	—	—	—
11	4	BK	1250	II	—	Ground	—	4.0	BK	1250	VIII	—
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	0.35	BU/RD	5612	I	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	D-BU/RD	5612	V	—
15	0.35	VT/OG	5611	I	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	V	—
16 - 23	—	—	—	—	—	Not Occupied	16 - 23	—	—	—	—	—
24	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	VI	—
25	0.5	GY/OG	3480	I	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	VI	—

						Low Control						
26	0.35	GN	5060	I	—	Low Speed GMLAN Serial Data	26	0.35	GN	5060	V	—
27 - 32	—	—	—	—	—	Not Occupied	27 - 32	—	—	—	—	—
33	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	33	0.35	OG/GY	3066	VI	—
34	0.5	OG/BN	3479	I	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	VI	—
35	0.35	RD/GN	4440	I	—	Battery Positive Voltage	35	0.35	RD/GN	4440	VII	—
36	0.35	BK/WH	2751	I	—	Signal Ground	36	0.5	BK/WH	2751	IV	—
37 - 48	—	—	—	—	—	Not Occupied	37 - 48	—	—	—	—	—

X320 Passenger Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)





Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: Pending

Description: 48-Way 1.6, 2.8, 5.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: Pending

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	—	J-35616-14 (GN)	No Tool Required	Not Available	Not Available	Not Available	Not Available
II	—	J-35616-32 (OR)	No Tool Required	Not Available	Not Available	Not Available	Not Available
III	13327190	J-35616-3 (GY)	No Tool Required	Not Available	Not Available	Not Available	Not Available
IV	13575721	J-35616-4A (PU)	No Tool Required	12110844	Delphi 4	E	4
V	13579985	J-35616-3 (GY)	No Tool Required	Not Available	Not Available	Not Available	Not Available
VI	19301761	J-35616-35 (VT)	No Tool Required	Not Available	Not Available	Not Available	Not Available
VII	19332365	J-35616-19 (BK)	No Tool Required	Not Available	Not Available	Not Available	Not Available
VIII	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IX	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
X	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
XI	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
XII	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
XIII	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
XIV	19332365	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X320 Passenger Seat Cushion Harness to Body Harness X88/Z88+(AG1/A45/KQV)

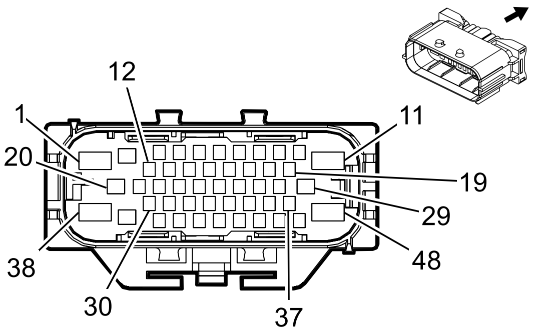
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BN	1440	XI	—	Battery Positive Voltage	2	2.5	RD/BN	1440	XII	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/VT	1362	IX	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	XIV	—
7	0.35	BK/OG	1361	IX	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	XIV	—
8	0.75	BR/VT	2077	VIII	—	Driver Heated Seat Element Control	8	0.75	BN/VT	2077	III	—
9	0.75	BR	2432	VIII	—	Driver Heated Back Element Control	9	0.75	BN	2432	III	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	4	BK	1250	X	—	Ground	11	4	BK	1250	II	—
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	0.35	BU/RD	5612	IX	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	BU/RD	5612	XIV	—

15	0.35	VT/OG	5611	IX	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	XIV	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.75	RD/GN	6140	VIII	—	Battery Positive Voltage	17	0.75	RD/GN	6140	VI	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	GN/VT	5906	IX	—	Driver Seat Vent Motor Control 1	19	0.35	GN/VT	5906	XIV	—
20 - 21	—	—	—	—	—	Not Occupied	20 - 21	—	—	—	—	—
22	0.75	BN/BK	2078	VIII	—	Driver Heated Seat Element Low Reference	22	0.75	BN/BK	2078	III	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.5	BR/OG	3067	IX	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	V	—
25	0.5	GY/OG	3480	IX	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	V	—
26	0.5	GN	5060	IX	—	Low Speed GMLAN Serial Data	26	0.35	GN	5060	IV	—
27	0.35	GN/BU	6133	IX	—	Local Interconnect Network Serial Data Bus 2	27	0.5	GN/BU	6133	VII	—
28	0.5	BK/YE	2080	IX	—	Driver Heated Seat NTC Low Reference	28	0.5	BK/YE	2080	VII	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	BU	2425	IX	—	Driver Heated Back NTC Signal	30	0.5	BU	2425	VII	—

31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.5	YE/GY	2079	IX	—	Driver Heated Seat NTC Signal	32	0.5	YE/GY	2079	VII	—
33	0.5	OG/GY	3066	IX	—	Passenger Side Impact Module High Control	33	0.35	OG/GY	3066	I	—
34	0.5	OG/BR	3479	IX	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	V	—
35	0.35	RD/GN	4440	IX	—	Battery Positive Voltage	35	0.35	RD/GN	4440	XIII	—
36	0.35	BK/WH	2751	IX	—	Signal Ground	36	0.5	BK/WH	2751	VII	—
37 - 45	—	—	—	—	—	Not Occupied	37 - 45	—	—	—	—	—
46	0.35	GY	157	IX	—	Interior Lamp Control	46	0.35	WH/YE	7557	XIV	—
47	0.75	RD/GN	5140	VIII	—	Battery Positive Voltage	47	0.75	RD/GN	5140	XII	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X320 Passenger Seat Cushion Harness to Body Harness Z75+ULT

—



Connector Part Information

Harness Type: Body

OEM Connector: Not Available

Service Connector: Pending

Description: —

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: 19301796

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	13505807	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13575380	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	19352419	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VII	19353142	J-35616-3 (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VIII	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IX	Not Required	J-35616-32 (OR)	No Tool Required	Not Required	Not Required	Not Required	Not Required

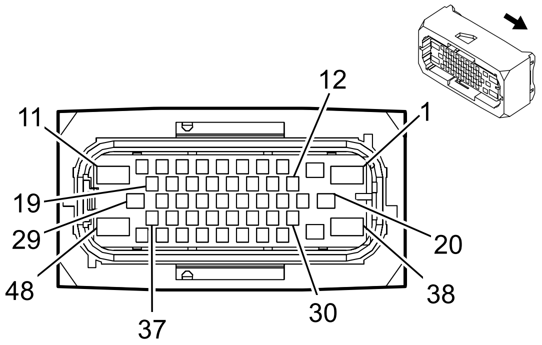
X320 Passenger Seat Cushion Harness to Body Harness Z75+ULT

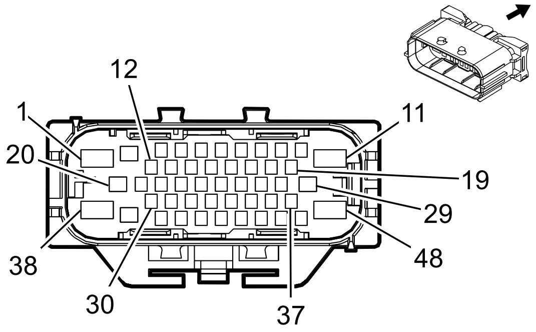
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BN	1440	II	—	Battery Positive Voltage	2	2.5	RD/BN	1440	I	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—

3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/VT	1362	II	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	VI	—
7	0.35	BK/OG	1361	II	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	VI	—
8 - 10	—	—	—	—	—	Not Occupied	8 - 10	—	—	—	—	—
11	4	BK	1250	III	—	Ground	11	4	BK	1250	IX	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	RD/WH	2240	II	—	Battery Positive Voltage	13	0.5	RD/BN	2240	IV	—
14	0.35	BU/RD	5612	II	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	D-BU/RD	5612	VI	—
15	0.35	VT/OG	5611	II	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	VI	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.75	RD/GN	6140	II	—	Battery Positive Voltage	17	0.75	RD/GN	6140	V	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	VT/WH	5908	II	—	Passenger Seat Vent Motor Control 1	19	0.35	VT/WH	5908	VI	—
20 - 22	—	—	—	—	—	Not Occupied	20 - 22	—	—	—	—	—
23	0.75	RD/BN	1140	II	—	Battery Positive Voltage	23	0.5	RD/BN	1140	IV	—

24	0.5	BN/OG	3067	II	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	VII	—
25	0.5	GY/OG	3480	II	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	VII	—
26	0.5	GN	5060	II	—	Low Speed GMLAN Serial Data	26	0.35	GN	5060	VI	—
27 - 32	—	—	—	—	—	Not Occupied	27 - 32	—	—	—	—	—
33	0.5	OG/GY	3066	II	—	Passenger Side Impact Module High Control	33	0.35	OG/GY	3066	VII	—
34	0.5	OG/BN	3479	II	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	VII	—
35	0.35	RD/GN	4440	II	—	Battery Positive Voltage	35	0.35	RD/GN	4440	VIII	—
36	0.35	BK/WH	2751	II	—	Signal Ground	36	0.5	BK/WH	2751	IV	—
37 - 45	—	—	—	—	—	Not Occupied	37 - 45	—	—	—	—	—
46	0.35	GY	157	II	—	Interior Lamp Control	46	0.35	GY	7557	VI	—
47 - 48	—	—	—	—	—	Not Occupied	47 - 48	—	—	—	—	—

X320 Passenger Seat Cushion Harness to Body Harness Z75-ULT





Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 15509590

Service Connector: Pending

Description: 48-Way F 1.5 MCP, 2.8 JPT, 6.3 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Body

OEM Connector: 15513436

Service Connector: Pending

Description: 48-Way M 1.6, 2.8, 5.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-40 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	—	J-35616-32 (OR)	No Tool Required	Not Available	Not Available	Not Available	Not Available
V	13327190	J-35616-3 (GY)	No Tool Required	Not Available	Not Available	Not Available	Not Available
VI	13575721	J-35616-4A (PU)	No Tool Required	12110844	Delphi 4	E	4
VII	13579985	J-35616-3 (GY)	No Tool Required	Not Available	Not Available	Not Available	Not Available
VIII	13582297	J-35616-64B (LT BU)	No Tool Required	Not Available	Not Available	Not Available	Not Available
IX	19301761	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
X	19301761	J-35616-35 (VT)	No Tool Required	Not Available	Not Available	Not Available	Not Available

X	19301761	J-35616-33 (VT)	No Tool Required	Not Available	Not Available	Not Available	Not Available
XI	19301767	J-35616-2A (GY)	J-38125-560	Not Available	Not Available	Not Available	Not Available
XII	19332365	J-35616-19 (BK)	J-38125-560	Not Available	Not Available	Not Available	Not Available
XIII	19332365	J-35616-19 (BK)	No Tool Required	Not Available	Not Available	Not Available	Not Available

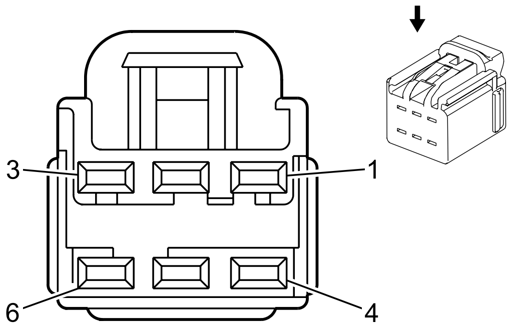
X320 Passenger Seat Cushion Harness to Body Harness Z75-ULT

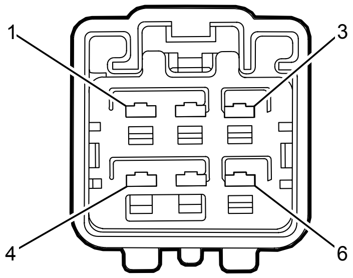
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	2.5	RD/BN	1440	III	—	Battery Positive Voltage	2	2.5	RD/BN	1440	IX	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.35	OG/VT	1362	I	—	Passenger Seat Belt Switch Signal	6	0.35	OG/VT	1362	XII	—
7	0.35	BK/OG	1361	I	—	Passenger Seat Belt Switch Low Reference	7	0.35	BK/OG	1361	XIII	—
8	0.75	BN/VT	2077	I	—	Driver Heated Seat Element Control	8	0.75	BN/VT	2077	V	—
9	0.75	BN	2432	I	—	Driver Heated Back Element Control	9	0.75	BN	2432	V	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	4	BK	1250	II	—	Ground	11	4	BK	1250	IV	—
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	0.35	BU/RD	5612	I	—	Passenger Seat Belt Tension Sensor 5V Reference	14	0.35	BU/RD	5612	XIII	—
15	0.35	VT/OG	5611	I	—	Passenger Seat Belt Tension Sensor Signal	15	0.35	VT/OG	5611	XIII	—

16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.75	RD/GN	6140	I	—	Battery Positive Voltage	17	0.75	RD/GN	6140	X	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.35	VT/WH	5908	I	—	Passenger Seat Vent Motor Control 1	19	0.35	VT/WH	5908	VIII	—
20 - 23	—	—	—	—	—	Not Occupied	20 - 23	—	—	—	—	—
24	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	24	0.35	BN/OG	3067	VII	—
25	0.5	GY/OG	3480	I	—	Passenger Seat Belt Anchor Pretensioner Low Control	25	0.35	GY/OG	3480	VII	—
26	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	26	0.35	GN	5060	VI	—
27	0.35	GN/BU	6133	I	—	Local Interconnect Network Serial Data Bus 2	27	0.5	GN/BU	6133	XIII	—
28 - 32	—	—	—	—	—	Not Occupied	28 - 32	—	—	—	—	—
33	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	33	0.35	OG/GR	3066	VII	—
34	0.5	OG/BN	3479	I	—	Passenger Seat Belt Anchor Pretensioner High Control	34	0.35	OG/BN	3479	VII	—
35	0.35	RD/GN	4440	I	—	Battery Positive Voltage	35	0.35	RD/GN	4440	XI	—

36	0.35	BK/WH	2751	I	—	Signal Ground	36	0.5	BK/WH	2751	XIII	—
37 - 45	—	—	—	—	—	Not Occupied	37 - 45	—	—	—	—	—
46	0.35	GY	157	I	—	Interior Lamp Control	46	0.35	WH/YE	7557	XII	—
47	0.75	RD/GN	5140	I	—	Battery Positive Voltage	47	0.75	RD/GN	5140	X	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—

X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 7283-6466-40

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F YESC Kaizen Series (L-GY)

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7282-6466-40

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M YESC Kaizen Series (L-GY)

Terminal Part Information

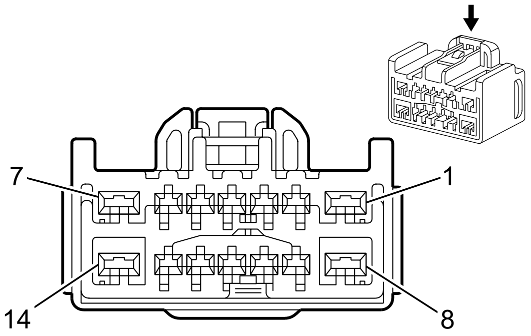
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

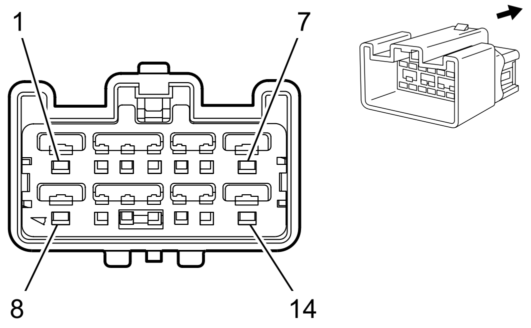
X321 Passenger Seat Back Harness to Passenger Seat Cushion Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BU/YE	792	I	—	Passenger Power Seat Lumbar Motor Down Control	1	1.5	BU/YE	792	II	—
2	0.75	BN/YE	793	I	—	Passenger Power Seat Lumbar Motor Up Control	2	1.5	BN/YE	793	II	—

3	0.75 1.5	BU BU	211 211	I I	— —	Passenger Power Seat Lumbar Motor Forward Control Passenger Power Seat Lumbar Motor Forward Control	3	1.5	BU	211	II	—
4	0.75 1.5	VT VT	210 210	I I	— —	Passenger Power Seat Lumbar Motor Rearward Control Passenger Power Seat Lumbar Motor Rearward Control	4	1.5	VT	210	II	—
5	1.5	GN	76	I	—	Passenger Power Seat Recline Motor Forward Control	5	1.5	GN	76	II	—
6	1.5	BU/BN	77	I	—	Passenger Power Seat Recline Motor Rearward Control	6	1.5	BU/BN	77	II	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75+ULT)





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 7283-6447-70

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way F 1.5, 2.8 Series (YE)

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 7282-6447-70

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way M 1.5, 2.8 Series (YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

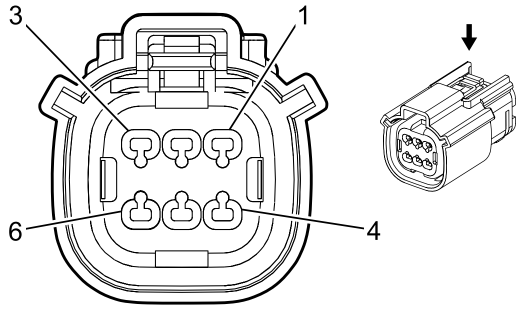
X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75+ULT)

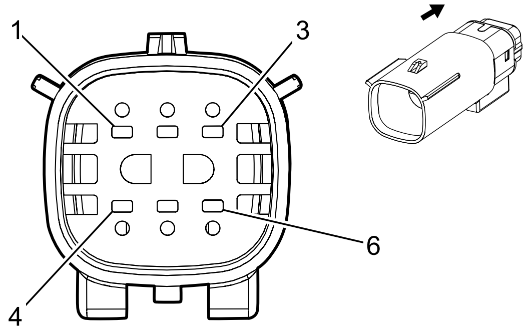
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	GN	76	II	—	Passenger Power Seat Recline Motor Forward Control	1	1.5	GN	76	IV	—

2	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	2	0.5	OG/GY	3066	III	—
3	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	3	0.5	BN/OG	3067	III	—
4	0.75	BK	1250	I	—	Ground	4	0.75	BK	1250	III	—
5	0.75	BN/BU	2479	I	—	Passenger Heated Seat Element Control	5	0.75	BN/BU	2479	III	—
6	0.5	RD/WH	2240	I	—	Battery Positive Voltage	6	0.5	RD/WH	2240	III	—
7	1.5	BU/BN	77	II	—	Passenger Power Seat Recline Motor Rearward Control	7	1.5	BU/BN	77	IV	—
8	0.75	RD/GN	6140	II	—	Battery Positive Voltage	8	0.75	RD/GN	6140	IV	—
9	0.35	VT/WH	5908	I	—	Passenger Seat Vent Motor Control 1	9	0.35	VT/WH	5908	III	—
10	0.35	GN/GY	3758	I	—	Local Interconnect Network Serial Data Bus 13	10	0.35	GN/GY	3758	III	—
11	0.5	VT	901	I	—	—	11	0.5	VT	901	III	—
12	0.5	GN	903	I	—	—	12	0.5	GN	903	III	—
13 - 14	—	—	—	—	—	Not Occupied	13 - 14	—	—	—	—	—

13 - 14	—	—	—	—	—	Not Occupied	13 - 14	—	—	—	—	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75-ULT)





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 33472-0682

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 150 MX Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 33482-0644

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 150 MX Series, Sealed (YE)

Terminal Part Information

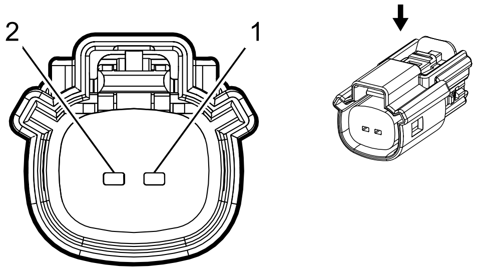
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

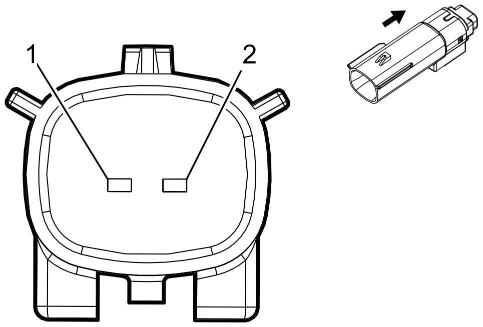
X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness (Z75-ULT)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	1	0.5	OG/GY	3066	II	—
2	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	2	0.5	BN/OG	3067	II	—

3	0.75	BK	1250	I	—	Ground	3	0.75	BK	1250	II	—
4	0.75 0.75	WH/BN RD/GN	2481 6140	I I	— —	Passenger Heated Back Element Control Battery Positive Voltage	4	0.75 0.75	WH/BN RD/GN	2481 6140	II II	— —
5	0.35	VT/WH	5908	I	—	Passenger Seat Vent Motor Control 1	5	0.35	VT/WH	5908	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88-(AG2/A45/KQV)





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 33471-0223

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.5 Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 33481-0210

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M 1.5 MX Series, Sealed (YE)

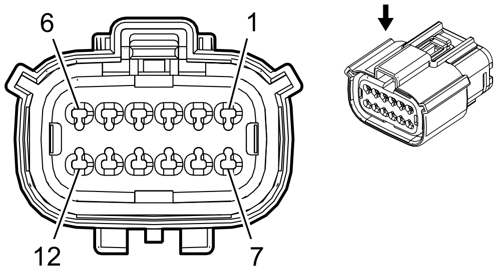
Terminal Part Information

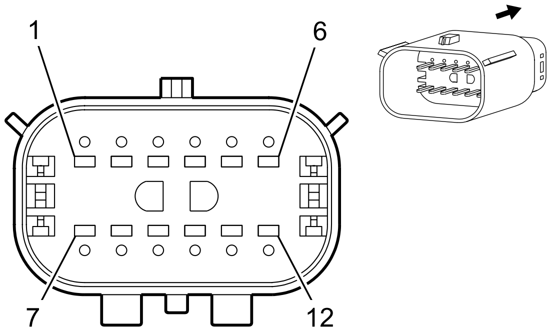
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88-(AG2/A45/KQV)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	1	0.5	OG/GY	3066	II	—
2	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	2	0.5	BN/OG	3067	II	—

X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88+(AG2/A45/KQV)





Connector Part Information

Harness Type: Passenger Seat Back

OEM Connector: 33472-1292

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way F 150 MX Series, Sealed (YE)

Connector Part Information

Harness Type: Passenger Seat Cushion

OEM Connector: 33482-1336

Service Connector: Service by Harness - See Part Catalog

Description: 12-Way M 150 MX Series, Sealed (YE)

Terminal Part Information

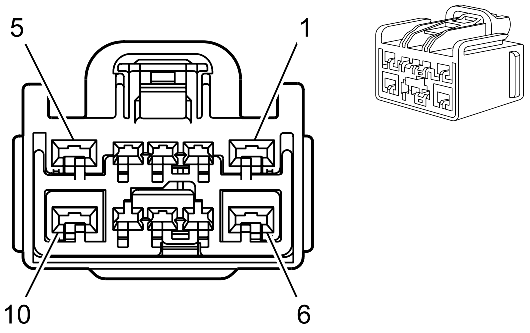
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

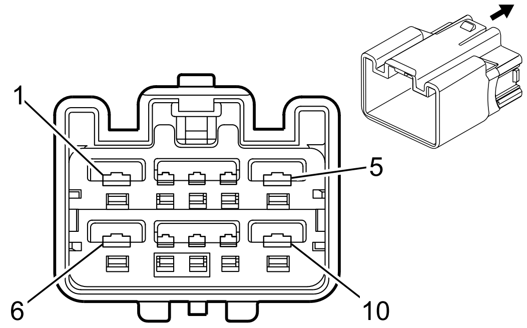
X322 Passenger Seat Back Harness to Passenger Seat Cushion Harness X88/Z88+(AG2/A45/KQV)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	OG/GY	3066	I	—	Passenger Side Impact Module High Control	1	0.5	OG/GY	3066	II	—
2	0.5	BN/OG	3067	I	—	Passenger Side Impact Module Low Control	2	0.5	BN/OG	3067	II	—

3	0.75	BK	1250	I	—	Ground	3	0.75	BK	1250	II	—
4	0.75	WH/BN	2481	I	—	Passenger Heated Back Element Control	4	0.75	WH/BN	2481	II	—
5	0.35	VT/WH	5908	I	—	Passenger Seat Vent Motor Control 1	5	0.35	VT/WH	5908	II	—
6	0.5	BK/GN	2482	I	—	Passenger Heated Back NTC Low Reference	6	0.5	BK/GN	2482	II	—
7	0.75	GY/BK	2480	I	—	Passenger Heated Seat Element Low Reference	7	0.75	GY/BK	2480	II	—
8	0.5	WH/BU	2436	I	—	Passenger Heated Back NTC Signal	8	0.5	WH/BU	2436	II	—
9	0.75	RD/GN	6140	I	—	Battery Positive Voltage	9	0.75	RD/GN	6140	II	—
10 - 12	—	—	—	—	—	Not Occupied	10 - 12	—	—	—	—	—

X324 Sunroof Harness to Headliner Harness





Connector Part Information

Harness Type: Sunroof

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F

Connector Part Information

Harness Type: Overhead Console

OEM Connector: 13506926

Service Connector: 89047070

Description: 10-Way M YESC Kaizen Series (L-GY)

Terminal Part Information

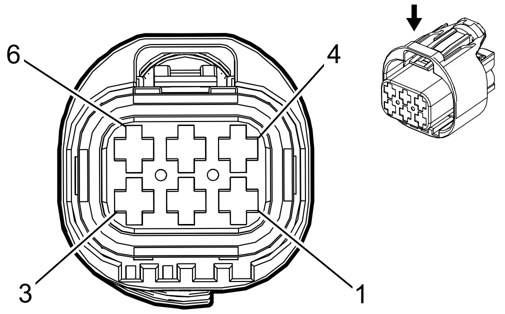
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	J-38125-217	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-5 (PU)	J-38125-212	Not Required	Not Required	Not Required	Not Required

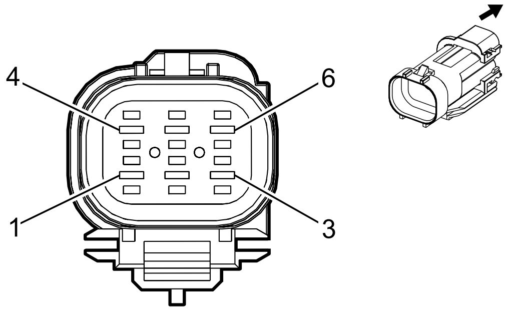
X324 Sunroof Harness to Headliner Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	GN/WH	100	I	—	Sunroof Switch Open Signal	2	0.35	GN/WH	100	II	—

3	0.35	BN/D-BU	2074	I	—	Sunroof Switch Express Signal	3	0.35	BN/D-BU	2074	II	—
4	0.35	GY/VT	2075	I	—	Sunroof Switch Close Vent Signal	4	0.35	GY/VT	2075	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.35	VT/YE	43	I	—	Accessory Ignition Voltage	6	0.35	VT/YE	43	III	—
7	0.35	D-BU/WH	110	I	—	Sunroof Switch Close Signal	7	0.35	D-BU/WH	110	II	—
8	0.35	YE/VT	144	I	—	Sunroof Switch Open Vent Signal	8	0.35	YE/VT	144	II	—
9 - 10	—	—	—	—	—	Not Occupied	9 - 10	—	—	—	—	—

X338 Body Harness to 3rd Row Seat Left Harness





Connector Part Information

- Harness Type: Body
- OEM Connector: 10865192
- Service Connector: 19332889
- Description: 6-Way F 2.8 Junior Power Timer Series, Sealed (BK)

Connector Part Information

- Harness Type: 3rd Row Seat Left
- OEM Connector: —
- Service Connector: Service by Harness - See Part Catalog
- Description: 6-Way M

Terminal Part Information

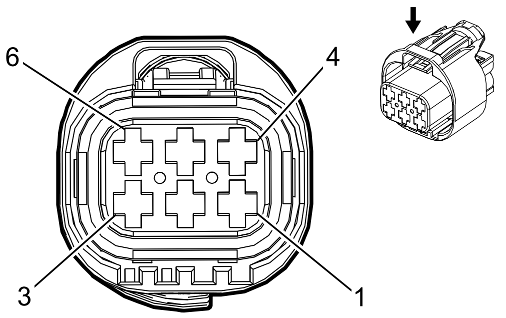
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-4A (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

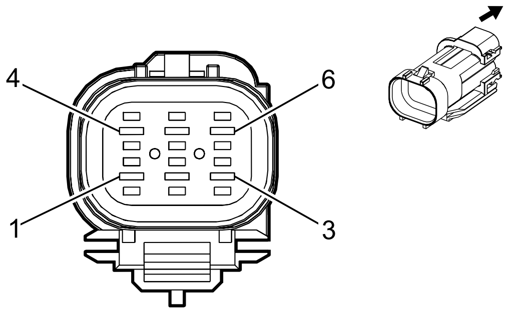
X338 Body Harness to 3rd Row Seat Left Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/D-BU	1240	I	—	Battery Positive Voltage	1	2.5	RD/D-BU	1240	II	—
2	0.5	GN	4224	I	—	LH Third Row Seat Recline Rearward Signal	2	0.5	GN	4224	II	—

3	0.5	GN/BK	4223	I	—	LH Third Row Seat Recline Forward Signal	3	0.5	GN/BK	4223	II	—
4	0.5	YE	4220	I	—	RH Third Row Seat Recline Rearward Signal	4	0.5	YE	4220	II	—
5	0.5	YE/BK	4219	I	—	RH Third Row Seat Recline Forward Signal	5	0.5	YE/BK	4219	II	—
6	2.5	BK	1150	I	—	Ground	6	2.5	BK	1150	II	—

X340 3rd Row Seat Right Harness to 3rd Row Seat Left Harness (AS8)





Connector Part Information

Harness Type: 3rd Row Seat Right

OEM Connector: 13125598

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 2.8 Junior Power Timer Series, Sealed (BK)

Connector Part Information

Harness Type: 3rd Row Seat Left

OEM Connector: 1452324-2

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 2.8 Series, Sealed (BK)

Terminal Part Information

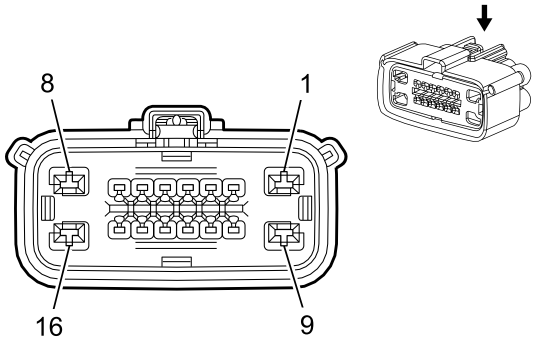
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Available	J-35616-35 (VT)	Not Available	Not Available	Not Available	Not Available	Not Available
II	Not Available	J-35616-64B (L-BU)	Not Available	Not Available	Not Available	Not Available	Not Available
III	Not Available	J-35616-5 (PU)	Not Available	Not Available	Not Available	Not Available	Not Available
IV	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

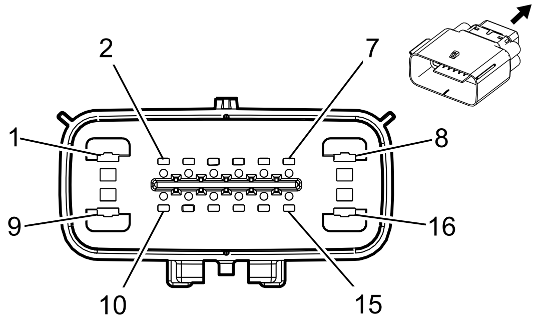
X340 3rd Row Seat Right Harness to 3rd Row Seat Left Harness (AS8)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	OG	4218	I	-	RH Third Row Seat Recline Rearward Control	1	1.5	OG	4218	III	-
2	0.35	WH/BK	4215	II	-	Seat Sensor Voltage Reference #2	2	0.35	WH/BK	4215	IV	-

3	1.5	RD/GY	4225	I	-	RH Third Row Seat Recline Forward Lock Actuator Control	3	1.5	RD/GY	4225	III	-
4	1.5	L-BU	4217	I	-	RH Third Row Seat Recline Motor Forward Control	4	1.5	L-BU	4217	III	-
5	0.35	WH/RD	4213	II	-	RH Third Row Seat Recline Position Sensor Signal	5	0.35	WH/RD	4213	IV	-
6	1.5	L-GN	4226	I	-	RH Third Row Seat Recline Rearward Lock Actuator Control	6	1.5	L-GN	4226	III	-

X348 Center Seat Harness to Body Harness (AZ3+AVF)





Connector Part Information

Harness Type: Center Seat

OEM Connector: 34985-1606

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Body

OEM Connector: 33129084

Service Connector: 19331031

Description: 16-Way M 1.5, 2.8 Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	19119440	J-35616-3 (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
IV	19300435	J-35616-41 (BU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available

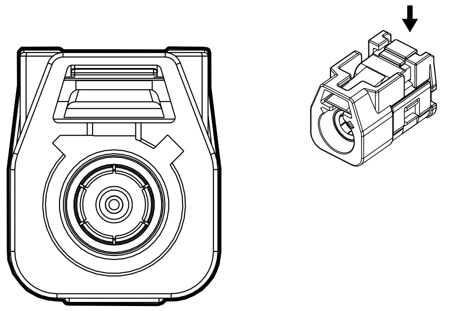
X348 Center Seat Harness to Body Harness (AZ3+AVF)

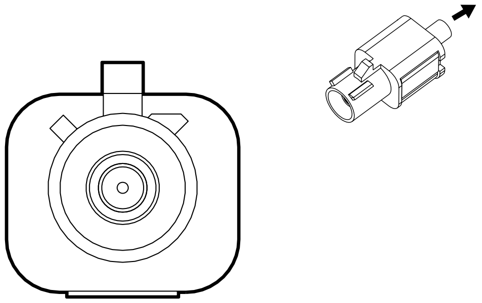
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5	VT/YE	143	II	—	Accessory Ignition Voltage	1	1.5	VT/YE	143	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—

2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BK	5842	I	—	Auxiliary Audio Screen 2	3	0.5	BK	5842	III	—
4	0.35	GY	5839	I	—	Left Auxiliary Audio Signal 2	4	0.35	GY	5839	III	—
5	0.35	BU	2060	I	—	Auxiliary Detection Signal	5	0.35	D-BU	2060	III	—
6	0.35	BK	2550	I	—	Ground	6	0.75	BK	2550	III	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	1.5	BK	1250	II	—	Ground	8	1.5	BK	1250	IV	—
9	1.5	VT/YE	243	II	—	Accessory Ignition Voltage	9	1.5	VT/YE	243	IV	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.35	GN	5841	I	—	Right Auxiliary Audio Signal 2	11	0.35	GN	5841	III	—
12	0.35	VT	5843	I	—	Auxiliary Audio Common Signal	12	0.35	VT	5843	III	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.75	RD/VT	340	I	—	Battery Positive Voltage	14	0.75	RD/VT	340	III	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
		BK	1250	II	—	Ground			BK	1250	IV	—

16	1.5						16	1.5				

X353 Headliner Jumper COAX to Headliner COAX (-SWB)+DRZ





Connector Part Information

Harness Type: COAX

OEM Connector: 5-2138895-1

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type (BK)

Connector Part Information

Harness Type: COAX

OEM Connector: 13594293

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type (BK)

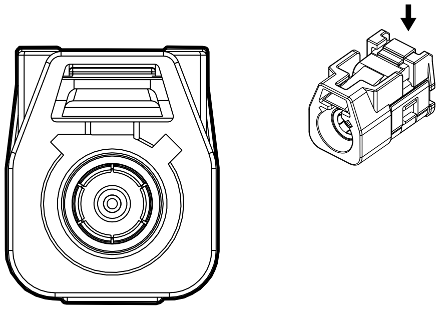
Terminal Part Information

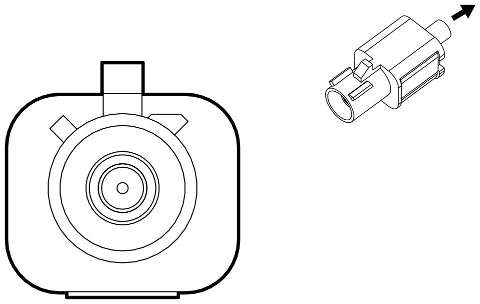
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X353 Headliner Jumper COAX to Headliner COAX (-SWB)+DRZ

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax	—	I	—	(ISRVM) Camera Video Signal	—	—	Coax	—	I	—

X354 Liftgate COAX to Headliner Jumper COAX (SWB)+DRZ





Connector Part Information

Harness Type: —

OEM Connector: 5–2138895–1

Service Connector: Service by Cable Assembly — See Part Catalog

Description: —

Connector Part Information

Harness Type: —

OEM Connector: 13594293

Service Connector: Service by Cable Assembly — See Part Catalog

Description: —

Terminal Part Information

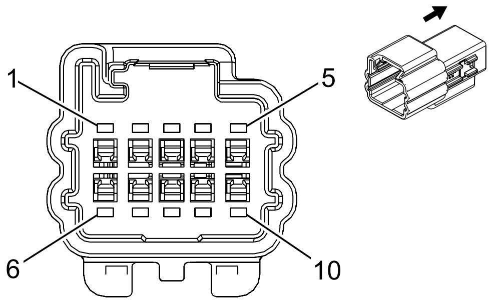
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X354 Liftgate COAX to Headliner Jumper COAX (SWB)+DRZ

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
C	—	—	6208	II	—	Coaxial Camera Signal	C	—	—	6208	IV	—
S	—	—	6209	III	—	Coaxial Camera Low Reference	S	—	—	6209	I	—

X366 Rear Seat Entertainment Jumper Harness to Headliner Harness

—



Connector Part Information

Harness Type: Rear Seat Entertainment Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 10-Way F

Connector Part Information

Harness Type: Headliner

OEM Connector: 33174126

Service Connector: 13595576

Description: 10-Way M 1.2 Series (BK)

Terminal Part Information

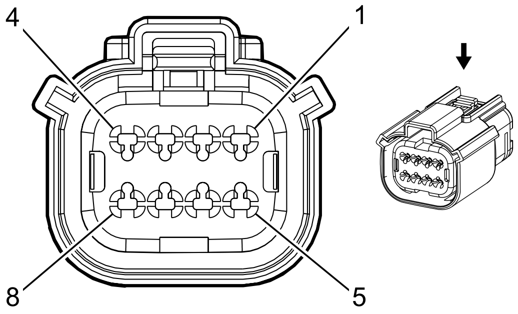
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	19333324	J-35616-13 (BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

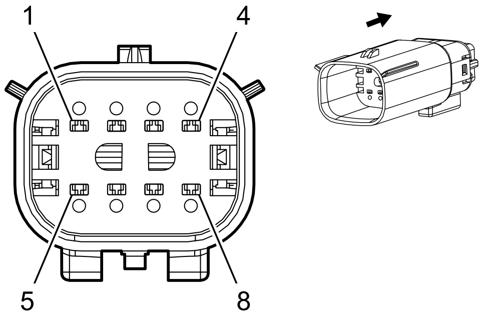
X366 Rear Seat Entertainment Jumper Harness to Headliner Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	WH	7262	I	—	Rear Seat Entertainment Channel 3 Audio Signal Right (+)	1	0.35	WH/GN	7262	II	—
2	0.35	BN/WH	7263	I	—	Rear Seat Entertainment Channel 3 Audio Signal Right (-)	2	0.35	BN/WH	7263	II	—
3	0.35	WH/VT	7260	I	—	Rear Seat Entertainment Channel 3 Audio Signal Left (+)	3	0.35	WH/VT	7260	II	—
4	0.35	BN	7261	I	—	Rear Seat Entertainment Channel 3 Audio Signal Left (-)	4	0.35	BN	7261	II	—

5	0.35	BARE	7264	I	—	Rear Seat Entertainment Channel 3 Audio Drain Wire	5	0.35	BARE	7264	II	—
6	0.35	WH/BN	7267	I	—	Rear Seat Entertainment Channel 4 Audio Signal Right (+)	6	0.35	WH/BN	7267	II	—
7	0.35	BN/D-BU	7268	I	—	Rear Seat Entertainment Channel 4 Audio Signal Right (-)	7	0.35	BN/D-BU	7268	II	—
8	0.35	WH/D-BU	7265	I	—	Rear Seat Entertainment Channel 4 Audio Signal Left (+)	8	0.35	WH/D-BU	7265	II	—
9	0.35	BN/GY	7266	I	—	Rear Seat Entertainment Channel 4 Audio Signal Left (-)	9	0.35	BN/GY	7266	II	—
10	0.35	BARE	7269	I	—	Rear Seat Entertainment Channel 4 Audio Drain Wire	10	0.35	BARE	7269	II	—

X378 Body Harness to Rear Seat Harness





Connector Part Information

Harness Type: Body

OEM Connector: 13654393

Service Connector: 13577527

Description: 8-Way F 1.5 Series, Sealed (BK)

Connector Part Information

Harness Type: Rear Seat

OEM Connector: 33482-0801

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M 150 MX Series, Sealed (BK)

Terminal Part Information

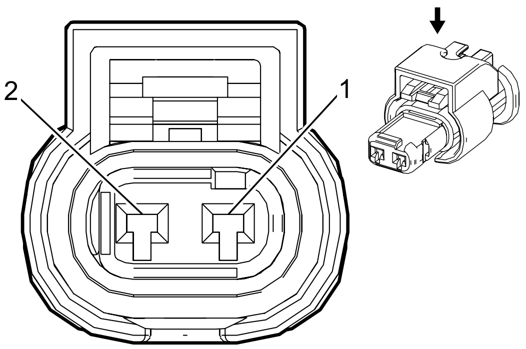
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

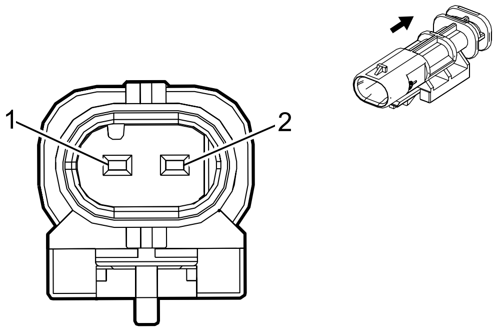
X378 Body Harness to Rear Seat Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	RD/D-BU	1240	I	—	Battery Positive Voltage	1	0.75	RD/BU	1240	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.75	GN/BN	2296	I	—	Right Rear Heated Seat	3	0.75	GN/BN	2296	II	—

3	0.75					Cushion Element Control	3	0.75				
4 - 5	—	—	—	—	—	Not Occupied	4 - 5	—	—	—	—	—
6	0.5	BN/WH	6809	I	—	Right Rear Seat Fold Tumble Control	6	0.5	BN/WH	6809	II	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.75	BK	1250	I	—	Ground	8	0.75	BK	1250	II	—

X380 Body Harness to Driver Roof Rail Airbag Jumper Harness





Connector Part Information

Harness Type: Body

OEM Connector: 13863037

Service Connector: 13587886

Description: 2-Way F 1.2 MCP Series, Sealed (YE)

Connector Part Information

Harness Type: Driver Roof Rail Airbag Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M

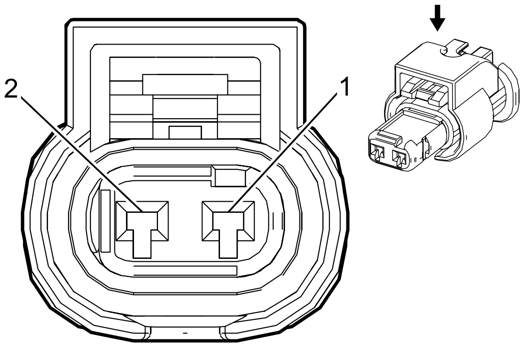
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

X380 Body Harness to Driver Roof Rail Airbag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	OG/GN	5019	I	—	Left Front Head Curtain Module High Control	1	0.35	OG	5019	II	—
2	0.35	VT/OG	5020	I	—	Left Front Head Curtain Module Low Control	2	0.35	VT/OG	5020	II	—

X390 Body Harness to Driver Roof Rail Air Bag Jumper Harness



—

Connector Part Information

Harness Type: Body

OEM Connector: 13863037

Service Connector: 13587886

Description: 2-Way F 1.2 Multiple Contact Point Series, Sealed (YE with BK Inner Connector)

Connector Part Information

Harness Type: Driver Roof Rail Air Bag Jumper

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M

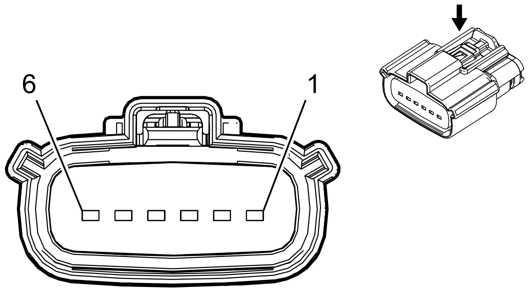
Terminal Part Information

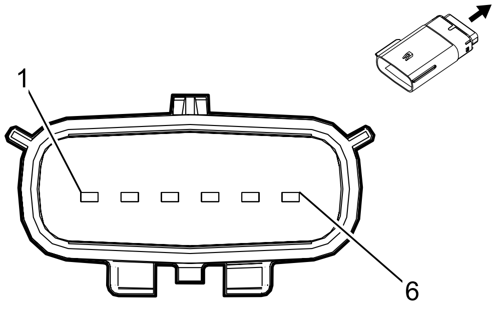
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	Not Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	Pending	No Tool Required	Not Required	Not Required	Not Required	Not Required

X390 Body Harness to Driver Roof Rail Air Bag Jumper Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	OG/GY	5021	I	—	Right Front Head Curtain Module High Control	1	0.35	OG/GY	5021	II	—
2	0.35	WH/OG	5022	I	—	Right Front Head Curtain Module Low Control	2	0.35	WH/OG	5022	II	—

X410 Left Tail Lamp Jumper Harness to Chassis Harness





Connector Part Information

Harness Type: Left Tail Lamp Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Chassis

OEM Connector: 15456940

Service Connector: 19303225

Description: 6-Way M 1.5 MX Series, Sealed (BK)

Terminal Part Information

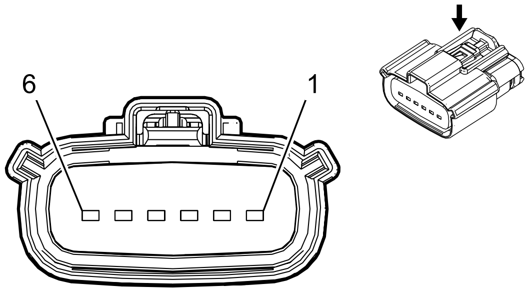
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

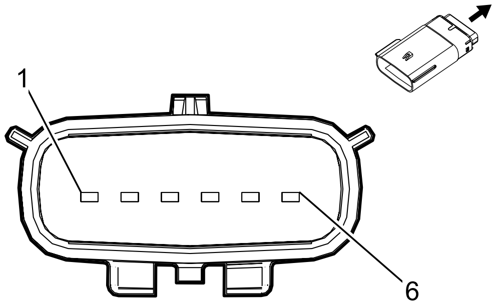
X410 Left Tail Lamp Jumper Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN	24	I	—	Backup Lamp Control	1	0.5	GN	24	II	—
2	0.5	YE	18	I	—	Left Rear Stop/Turn Lamp Control	2	0.5	YE/D-BU	18	II	Z88/X88/Z75

3	0.5	YE/BK	5356	I	—	Left Tail Lamp Outage Detection Signal	3	0.5	YE/BK	5356	II	—
4	0.75	GY/YE	7542	I	—	Left Rear Stop Lamp Control	4	0.75	GY/YE	7542	II	—
5	0.5	VT/GY	709	I	—	Left Park Lamp Control	5	0.5	VT/GY	709	II	—
6	1	BK	1750	I	—	Ground	6	1	BK	1750	II	—

X420 Right Tail Lamp Jumper Harness to Chassis Harness





Connector Part Information

Harness Type: Right Tail Lamp Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Chassis

OEM Connector: 15456940

Service Connector: 19303225

Description: 6-Way M 1.5 MX Series, Sealed (BK)

Terminal Part Information

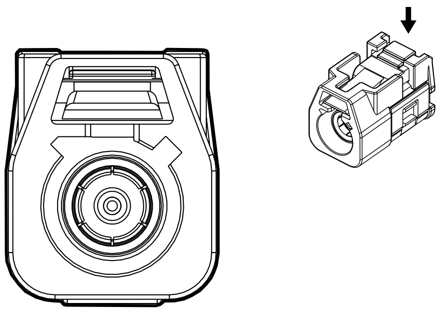
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

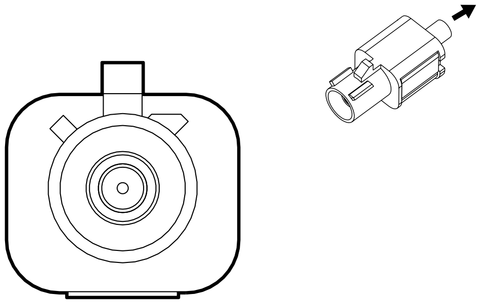
X420 Right Tail Lamp Jumper Harness to Chassis Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN	24	I	—	Backup Lamp Control	1	0.5	GN	24	II	—
2	0.5	BN	19	I	—	Right Rear Stop/Turn Lamp Control	2	0.5	BN/GN	19	II	—

3	0.5	VT/YE	5357	I	—	Right Tail Lamp Outage Detection Signal	3	0.5	VT/YE	5357	II	—
4	0.75	WH/YE	7541	I	—	Right Rear Stop Lamp Control	4	0.75	WH/YE	7541	II	—
5	0.5	GY/BN	309	I	—	Right Park Lamp Control	5	0.5	GY/BN	309	II	—
6	0.75	BK	2150	I	—	Ground	6	0.75	BK	2150	II	—

X423 Liftgate COAX to Headliner COAX (-SWB)+DRZ





Connector Part Information

Harness Type: COAX

OEM Connector: 5-2138895-1

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type (BK)

Connector Part Information

Harness Type: COAX

OEM Connector: 13594293

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type (BK)

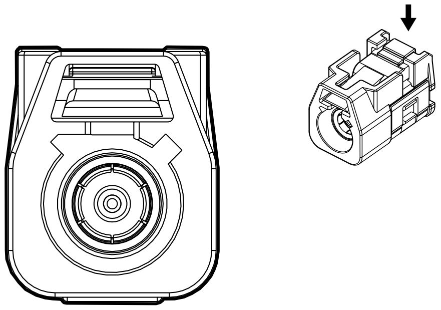
Terminal Part Information

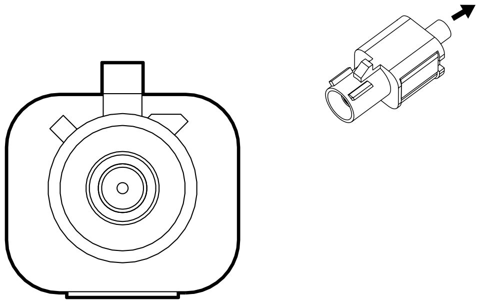
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X423 Liftgate COAX to Headliner COAX (-SWB)+DRZ

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax	—	I	—	(ISRVM) Camera Video Signal	—	—	Coax	—	I	—

X424 Liftgate Jumper Coax to Liftgate Coax (DRZ)





Connector Part Information

Harness Type: Liftgate COAX

OEM Connector: 5-2138895-1

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type (BK)

Connector Part Information

Harness Type: Liftgate COAX

OEM Connector: 13594293

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type (BK)

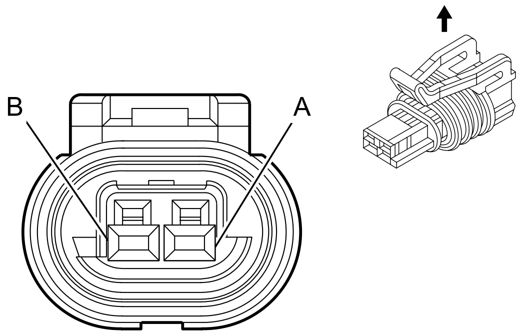
Terminal Part Information

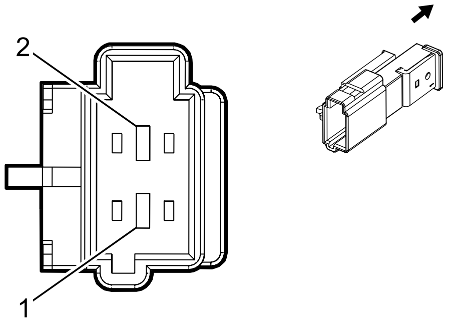
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	No Tool Required	No Tool Required	Not Required	Not Required	Not Required	Not Required

X424 Liftgate Jumper Coax to Liftgate Coax (DRZ)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax	—	I	—	(ISRVM) Camera Video Signal	—	—	Coax	—	I	—

X485 Center High Mounted Stop Lamp Jumper Harness to Body Harness





Connector Part Information

Harness Type: High Mount Stop Lamp Jumper

OEM Connector: 15449028

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 150 GT Series, Sealed (BK)

Connector Part Information

Harness Type: Body

OEM Connector: 13662506

Service Connector: 13574780

Description: 2-Way M 1.6 Timer Series (BK)

Terminal Part Information

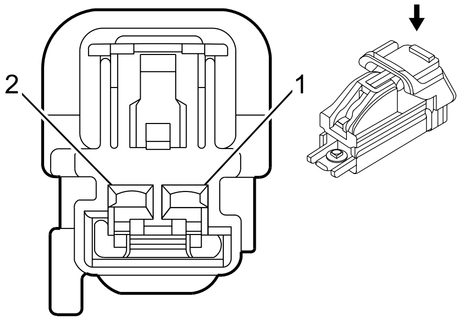
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required

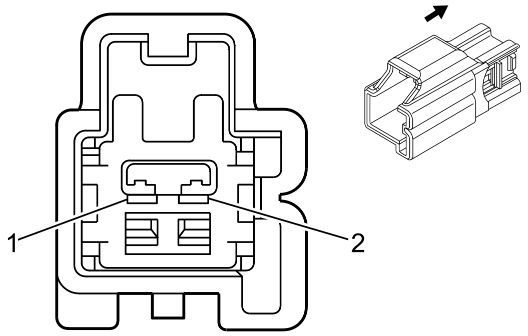
X485 Center High Mounted Stop Lamp Jumper Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1						Stop Lamp Relay Coil Control	1	0.5	VT/WH	5065	II	—
2	—	—	—	—	—	Ground	2	1	BK	1450	II	—

A	0.5	VT/WH	5065	I	—	Stop Lamp Relay Coil Control	A	—	—	—	—	—
B	0.5	BK	1450	I	—	Ground	B	—	—	—	—	—

X486 Body Harness to Headliner Harness





Connector Part Information

Harness Type: Body

OEM Connector: 10846794

Service Connector: 88988504

Description: 2-Way F 1.5 YESC Series (L-GY)

Connector Part Information

Harness Type: Headliner

OEM Connector: 10846798

Service Connector: 88988503

Description: 2-Way M 1.5 Series (L-GY)

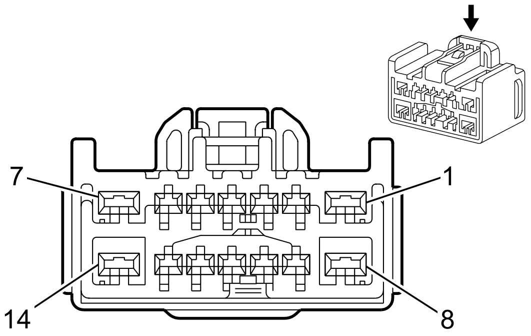
Terminal Part Information

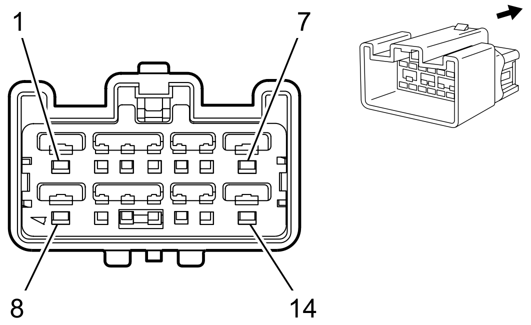
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X486 Body Harness to Headliner Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY	157	I	—	Interior Lamp Control	1	0.5	GY	157	II	—
2	1	BK	1450	I	—	Ground	2	0.5	BK	1450	II	—

X487 Body Harness to Auxiliary HVAC Jumper Harness





Connector Part Information

Harness Type: Body

OEM Connector: 10847017

Service Connector: 88956524

Description: 14-Way F 1.5, 2.8 Series (L-GY)

Connector Part Information

Harness Type: Auxiliary HVAC Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way M

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13575838	J-35616-35 (VT)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
II	13575839	J-35616-35 (VT)	J-38125-11A	7116-4112-02	Yazaki 9	C	D
III	19300635	J-35616-2A (GY)	J-38125-217	Not Available	Not Available	Not Available	Not Available
IV	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required

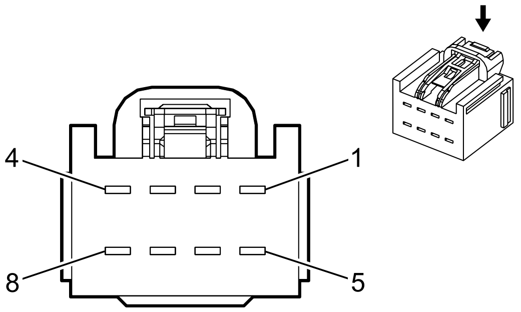
X487 Body Harness to Auxiliary HVAC Jumper Harness

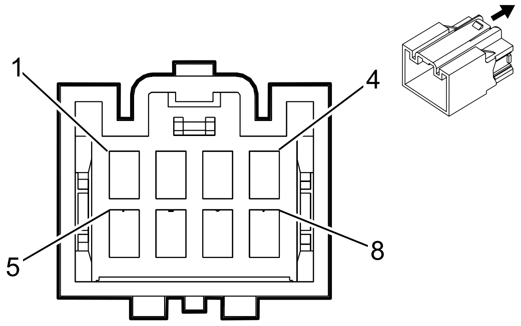
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD/GY	1740	II	—	Battery Positive Voltage	1	2.5	RD/GY	1740	IV	—

2	0.35	GN/WH	5729	III	—	Rear Mode Motor Control	2	0.35	GN/WH	5729	IV	—
3	0.35	BK/GN	5730	III	—	Rear Mode Motor Low Reference	3	0.35	BK	5730	IV	—
4	0.35	GY/RD	598	III	—	5V Reference	4	0.35	GY/RD	598	IV	—
5	0.35	GY	2599	III	—	Rear Mode Motor Signal	5	0.35	GY	2599	IV	—
6	0.35	WH/BN	2775	III	—	Rear Air Temperature Motor Control	6	0.35	WH/BN	2775	IV	—
7	0.35	BN	404	I	—	Upper Air Temperature Sensor Signal	7	0.35	BN	404	IV	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—
9	0.35	GN/BK	2211	III	—	Rear Blower Motor Speed Control	9	0.35	GN/BK	2211	IV	—
10	0.35	BN/BK	405	III	—	Lower Air Temperature Sensor Signal	10	0.35	BN/BK	405	IV	—
11	0.35	BK/YE	407	III	—	Sensor Low Reference	11	0.35	BK/YE	407	IV	—
12	0.35	GY/D-BU	2145	III	—	Passenger Air Temperature Switch Signal	12	0.35	GY/D-BU	2145	IV	—
13	0.35	GY	2614	III	—	Rear Air Temperature Door Control	13	0.35	GY	2614	IV	—

14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—

X490 Body Harness to Body Harness





Connector Part Information

Harness Type: Body

OEM Connector: 10847011

Service Connector: 13581036

Description: 8-Way F 2.8 Series (L-GY)

Connector Part Information

Harness Type: Body

OEM Connector: 13506919

Service Connector: 19329824

Description: 8-Way M 2.8 YESC Series (L-GY)

Terminal Part Information

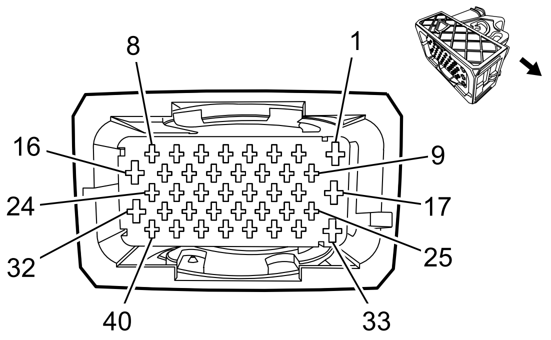
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

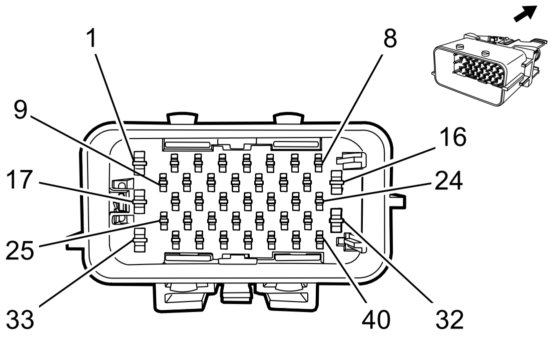
X490 Body Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BN/VT	293	I	—	Rear Defog Element Control	1	2.5	BN/VT	293	II	—
2	0.5	D-BU/WH	6128	I	—	Rear Closure Unlatch Motor Unlatch Control	2	0.5	D-BU/WH	6128	II	—

3	0.5	D-BU/YE	6795	I	—	Lift Glass/Rear Compartment Lid Motor Release Control 2	3	0.5	D-BU/YE	6795	II	—
4	2.5	RD/GY	1740	I	—	Battery Positive Voltage	4	2.5	RD/GY	1740	II	—
5	0.5	RD/D-BU	840	I	—	Battery Positive Voltage	5	0.5	RD/D-BU	840	II	—
6	3	RD/GY	7040	I	—	Battery Positive Voltage	6	3	RD/GY	7040	II	—
7	0.75	RD/YE	3040	I	—	Battery Positive Voltage Battery Positive Voltage	7	0.75	RD/YE	3040	II	—
8	1.5	RD/D-BU	6040	I	—	Battery Positive Voltage	8	1.5	RD/D-BU	6040	II	—

X495 Body Harness to Rear Fascia Harness





Connector Part Information

Harness Type: Body

OEM Connector: 13603185

Service Connector: 13576549

Description: 40-Way F 1.5, 2.8 Series, Sealed (BK)

Connector Part Information

Harness Type: Rear Fascia

OEM Connector: 13603208

Service Connector: Service by Harness - See Part Catalog

Description: 40-Way M 1.5 DSQ, 2.8 ATS Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	13576369	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
II	13580830	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
III	13580834	J-35616-14 (GN)	J-38125-560	60000641	AFL 21	2	5
IV	13580834	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13584463	J-35616-4A (PU)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VI	Not Required	J-35616-34 (YE)	No Tool Required	Not Required	Not Required	Not Required	Not Required
VII	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X495 Body Harness to Rear Fascia Harness

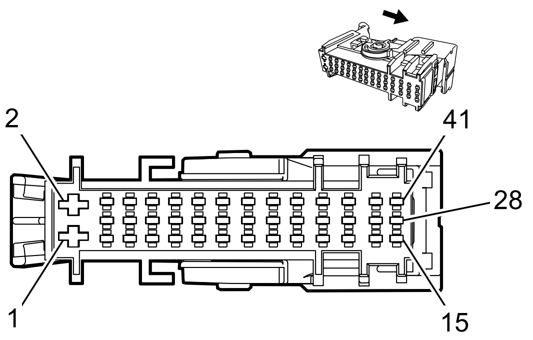
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option

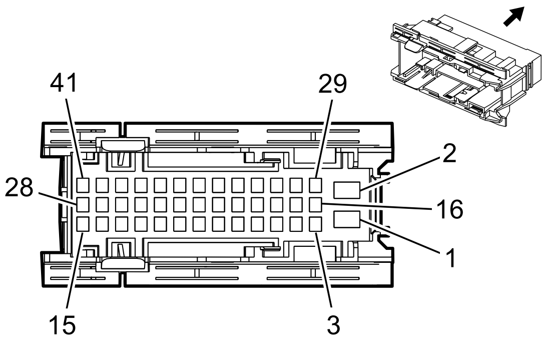
1	0.5 0.5	BN/WH BN/WH	2374 2374	V II	— —	Object Sensor Control Object Sensor Control	1	0.75	BN/WH	2374	VII	—
2	0.5	YE	2375	I	—	Left Rear Corner Object Sensor Signal	2	0.5	YE	2375	VI	—
3	0.5	YE/D-BU	2376	I	—	Left Rear Middle Object Sensor Signal	3	0.5	YE/D-BU	2376	VI	—
4	0.5	YE/VT	2378	I	—	Right Rear Corner Object Sensor Signal	4	0.5	YE/VT	2378	VI	—
5	0.5	YE/WH	2377	I	—	Right Rear Middle Object Sensor Signal	5	0.5	YE/WH	2377	VI	—
6	0.5	BK/GY	2379	I	—	Object Sensor Low Reference	6	0.5	BK/GY	2379	VI	—
7	0.5	GN	3156	I	—	Left Rear Supplemental Object Sensor Signal	7	0.5	GN	3156	VI	—
8	1	BK	1450	III	—	Ground Ground	8	0.5	BK	1450	VI	—
9	0.35	BN/VT	3809	I	—	Front Object Sensor Control 1	9	0.5	BN/VT	3809	VI	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	11	0.5	D-BU/VT	3813	VI	—

12	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	12	0.5	WH	3811	VI	—
13	0.5	BN/GN	3568	I	—	Passive Entry Rear Closure Antenna Signal Hi	13	0.5	BN/GN	3568	VI	—
14	0.5	GN/GY	3569	I	—	Passive Entry Rear Closure Antenna Signal Lo	14	0.5	GN/GY	3569	VI	—
15	0.35	GY/YE	5853	I	—	Driver Side Object Detection LED Signal 1	15	0.5	GY/YE	5853	VI	—
16	0.35 0.35	GY GY	5861 5861	V II	— —	Passenger Side Object Detection LED Signal 1 Passenger Side Object Detection LED Signal 1	16	0.75	GY	5861	VII	—
17	0.5	GN	5060	II	—	Low Speed GMLAN Serial Data	17	0.75	GN	5060	VII	—
18	0.5	GN/BN	4118	I	—	Local Interconnect Network Serial Data Bus 18	18	0.5	GN/BN	4118	VI	—
19	0.5	D-BU/VT	3813	I	—	High Speed GMLAN Serial Data (+) 4	19	0.5	D-BU/VT	3813	VI	—
20	0.5	WH	3811	I	—	High Speed GMLAN Serial Data (-) 4	20	0.5	WH	3811	VI	—
21	0.5	D-BU	3157	I	—	Right Rear Supplemental Object Sensor Signal	21	0.5	D-BU	3157	VI	—

22	0.75	RD/GN	3140	IV	—	Battery Positive Voltage	22	0.5	RD/GN	3140	VI	—
23	0.5	YE/GY	122	I	—	Rear Fog Lamp Control	23	0.5	YE/GY	122	VI	—
24 - 40	—	—	—	—	—	Not Occupied	24 - 40	—	—	—	—	—

X500 Driver Door Harness to Body Harness





Connector Part Information

Harness Type: Driver Door

OEM Connector: 13600509

Service Connector: Service by Harness - See Part Catalog

Description: 41-Way F 4.8 Timer, 1.5 DSQ Series

Connector Part Information

Harness Type: Body

OEM Connector: 13946876

Service Connector: 13587760

Description: 41-Way M 1.5, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575706	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VIII	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X500 Driver Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option

				ID							ID	
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	VIII	—
2	2.5	BK	1150	II	—	Ground	2	4	BK	1150	IV	—
3	0.5	GY/WH	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	0.5	GY/GN	5996	VI	—
4	0.35 0.5	BK/WH WH/RD	2551 3398	I I	— —	Signal Ground Passenger Mirror Motor Common Control	4	0.35 0.5	BK/WH WH	2551 3398	V VI	— —
5	0.35	OG/WH	1690	I	—	Automatic Day/Night Mirror Signal	5	0.35	YE/WH	1690	V	—
6	0.35	BK/YE	1691	I	—	Automatic Day/Night Mirror Low Reference	6	0.35	BK/YE	1691	V	—
7	0.35 0.5	D-BU/GN WH/GN	614 3412	I I	— —	Memory Seat Switch Set Signal Driver Mirror Motor Fold In Control	7	0.35 0.5	D-BU/GN WH/GN	614 3412	V VI	— —
8	0.35 0.5	WH GY/WH	615 3411	I I	— —	Memory Seat Switch Signal 1 Driver Mirror Motor Fold Out Control	8	0.35 0.5	WH GY/WH	615 3411	V VI	— —

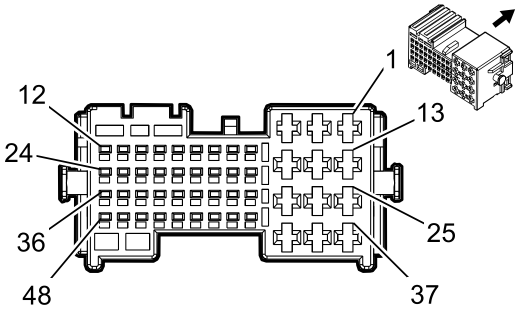
9	0.75	YE/GY	1956	I	—	Left Front Tweeter Speaker (-) Low Reference	9	0.75	YE/GY	1956	VII	—
10	1	D-BU	201	I	—	Left Front Speaker Control (+) 1 Left Front Speaker Control (+) 1	10	0.75 1	D-BU D-BU	201 201	VII III	— —
11	0.5	WH/BN	6201	I	—	Camera Control	11	0.5	WH/BN	6201	VI	—
12	0.35	WH/GN	2628	I	—	Left Side Vision Camera Video Signal (+)	12	0.35	WH/GN	2628	V	—
13	0.35	GY/GN	2625	I	—	Left Side Vision Camera Video Signal (-)	13	0.35	GY/GN	2625	V	—
14	0.5	OG/GN	2132	I	—	Left Front Side Impact Sensing Module Signal	14	0.35	OG/GN	2132	V	—
15	0.5	BK/OG	6628	I	—	Left Front Side Impact Sensing Module Low Reference	15	0.35	BK/OG	6628	V	—
16	0.35	WH	6816	I	—	Indicator Dimming Control Indicator Dimming Control	16	0.5 0.35	WH WH	6816 6816	VI V	— —
17	0.35	BN/WH	781	I	—	Driver Door Lock Switch Unlock Signal	17	0.35	BN/WH	781	V	—
		BN/YE	780	I	—	Driver Door Lock Switch			BN/YE	780	V	—

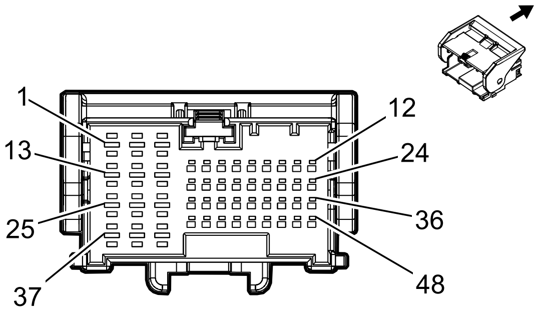
18	0.35					Lock Signal	18	0.35				
19	0.75	BN/BK	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/YE	294	VII	—
20	0.75	GY	5911	I	—	Door Lock Actuator Lock Control 2	20	0.75	GY	5911	VII	—
21	0.35	BK/D-BU	5978	I	—	Memory Switch Low Reference	21	0.35	BK/D-BU	5978	V	—
22	0.75	YE/D-BU	1856	I	—	Left Front Tweeter Speaker Control (+)	22	0.75	YE/D-BU	1856	VII	—
23	1	BN/D-BU	118	I	—	Left Front Speaker Signal (-) 1 Left Front Speaker Signal (-) 1	23	0.75 1	BN/D-BU BN/D-BU	118 118	VII III	— —
24	0.35	WH/YE	3574	I	—	Driver Door Open Switch Signal	24	0.35	WH/YE	3574	V	—
25	0.35	GN/WH	3570	I	—	Driver Door Handle Switch Signal	25	0.35	GN/WH	3570	V	—
26	0.5	BARE	2624	I	—	Left Side Vision Camera Video Drain Wire	26	0.35	BARE	2624	V	—
27	0.35	VT/GY	3561	I	—	Passive Entry Driver Door Antenna Signal Lo	27	0.35	VT/GY	3561	V	—
28	0.35	VT	3560	I	—	Passive Entry Driver Door Antenna Signal Hi	28	0.35	VT	3560	V	—

29	0.35	YE	6817	I	—	LED Backlight Dimming Control	29	0.35	YE	6817	V	—
30	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	30	0.35	WH/YE	7557	V	—
31	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	31	0.5	BN/YE	2267	VI	—
32	0.35	GY	5697	I	—	Child Lockout Indicator Control	32	0.35	GY	5697	V	—
33	0.5	GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	33	0.5	GN/YE	6134	VI	—
34	0.5	GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	34	0.5	GN/WH	7530	VI	—
35	0.35	BN/RD	3265	I	—	Child Security Lock Switch Signal	35	0.35	YE/BN	3265	V	—
36	0.5	GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	36	0.5	GN/BK	3396	VI	—
37	0.35	GY/YE	5853	I	—	Driver Side Object Detection LED Signal 1	37	0.35	GY/YE	5853	V	—
38	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	38	0.5	YE/VT	3397	VI	—
39	0.75	BN	5910	I	—	Door Double Lock Actuator Lock Control	39	0.75	BN	5910	VII	—

40	0.5	RD/VT	1940	I	—	Battery Positive Voltage	40	0.5	RD/VT	1940	VI	—
41	0.5	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	41	0.75	D-BU/WH	1314	VII	—

X505 Driver Door Harness to Driver Door Trim Harness





Connector Part Information

Harness Type: Driver Door

OEM Connector: 13889713

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.2 MCON, 2.8 MCP Series

Connector Part Information

Harness Type: Driver Door Trim

OEM Connector: 15512031

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way M 1.2 MCON, 2.8 MCP Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X505 Driver Door Harness to Driver Door Trim Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE	6817	II	—	LED Backlight Dimming Control	1	0.35	YE	6817	IV	—

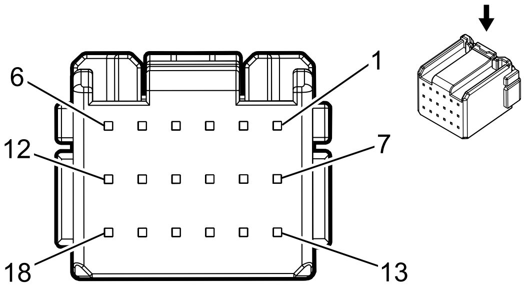
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	IV	—
3	0.35	WH	6816	II	—	Indicator Dimming Control	3	0.35	WH	6816	IV	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	5	0.75	BN/BK	3389	III	—
6	0.5	VT/D-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	6	0.75	VT/D-BU	3390	III	—
7	0.5	YE/BN	3391	I	—	Driver Mirror Motor Common Control	7	0.75	YE/BN	3391	III	—
8	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	8	0.75	GY/WH	3411	III	—
9	0.5	WH/GN	3412	I	—	Driver Mirror Motor Fold In Control	9	0.75	WH/GN	3412	III	—
10	0.35	GY/BN	3394	I	—	Driver Mirror Position Sensor Up (+) Down (-) Signal	10	0.35	GY/BN	3394	III	—
11	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	11	0.75	BN/BK	3389	III	—
12	0.35	VT/RD	3392	I	—	Driver Mirror Position Sensor 5V Reference	12	0.35	VT/RD	3392	III	—
13	0.35	WH/YE	3395	II	—	Driver Mirror Position Sensor Left (-) Right (+) Signal	13	0.35	WH/YE	3395	IV	—

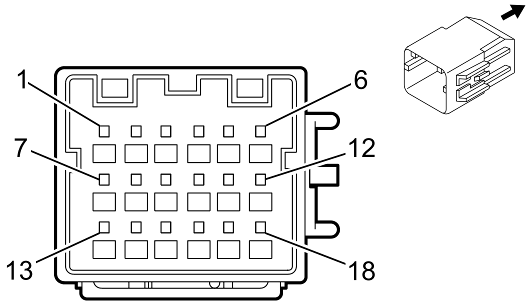
14	0.35	BK/BN	3393	II	—	Driver Mirror Position Sensor Low Reference	14	0.35	BK/BN	3393	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
17	0.5	BK	1150	I	—	Ground	17	0.35	BK	1150	III	—
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	0.75	YE/D-BU	1856	I	—	Left Front Tweeter Speaker Control (+)	20	—	—	—	—	—
21	0.75	YE/GY	1956	I	—	Left Front Tweeter Speaker (-) Low Reference	21	—	—	—	—	—
22	0.5	RD/VT	1940	I	—	Battery Positive Voltage	22	0.5	RD/VT	1940	III	—
23	0.75	BK	1150	I	—	Ground	23	0.75	BK	1150	III	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.5	GY/WH	3411	II	—	Driver Mirror Motor Fold Out Control	25	0.75	GY/WH	3411	IV	—
26	0.5	WH/GN	3412	II	—	Driver Mirror Motor Fold In Control	26	0.75	WH/GN	3412	IV	—
27 - 28	—	—	—	—	—	Not Occupied	27 - 28	—	—	—	—	—
29	0.35	GY	1136	I	—	Power Window Master Switch Left Front Down Signal	29	0.35	GY/BK	1136	III	—
		GN/WH	1300	I	—	Power Window Master			GN/WH	1300	III	—

30	0.35					Switch Left Front Up Signal	30	0.35			
31	0.35	GN/VT	7628	I	—	Power Window Motor Left Front Express Control	31	0.35	GN/VT	7628	III	—
32	0.35	BK/D-BU	5978	I	—	Memory Switch Low Reference	32	0.35	BK/D-BU	5978	III	—
33	0.35	D-BU/GN	614	I	—	Memory Seat Switch Set Signal	33	0.35	D-BU/GN	614	III	—
34	0.35	WH	615	I	—	Memory Seat Switch Signal 1	34	0.35	WH	615	III	—
35	—	—	—	—	—	Not Occupied	35	—	—	—	—	—
36	0.5	GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	36	0.5	GN/YE	6134	III	—
37	0.5	GN/WH	7530	II	—	Local Interconnect Network Serial Data Bus 8	37	0.5	GN/WH	7530	IV	—
38	1	BN/D-BU	118	II	—	Left Front Speaker Signal (-) 1	38	—	—	—	—	—
39	1	D-BU	201	II	—	Left Front Speaker Control (+) 1	39	—	—	—	—	—
40	0.35	BN/RD	3265	I	—	Child Security Lock Switch Signal	40	0.35	YE/BN	3265	III	—
41	0.35	WH/VT	3270	I	—	Driver Door Lock Motor Status Signal	41	0.35	WH/VT	3270	III	—

42	0.5	GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	42	0.75	GN/BK	3396	III	—
43	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	43	0.75	YE/VT	3397	III	—
44	0.5	WH/RD	3398	I	—	Passenger Mirror Motor Common Control	44	0.75	WH	3398	III	—
45	0.35	GY	5697	I	—	Child Lockout Indicator Control	45	0.35	GY	5697	III	—
46	0.35	D-BU/VT	1124	I	—	Door Lock Key Switch Unlock Signal	46	0.35	D-BU/VT	1124	III	—
47	0.35	BN/WH	781	I	—	Driver Door Lock Switch Unlock Signal	47	0.35	BN/WH	781	III	—
48	0.35	BN/YE	780	I	—	Driver Door Lock Switch Lock Signal	48	0.35	BN/YE	780	III	—

X510 Outside Rearview Mirror Harness to Driver Door Harness





Connector Part Information

Harness Type: Outside Rearview Mirror

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 18-Way F

Connector Part Information

Harness Type: Driver Door

OEM Connector: 13888973

Service Connector: Service by Harness - See Part Catalog

Description: 18-Way M 0.64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X510 Outside Rearview Mirror Harness to Driver Door Harness

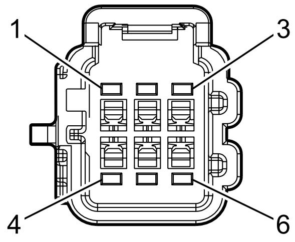
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY/WH	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	1	0.5	GY/WH	5996	II	—
2	0.35	OG/WH	1690	I	—	Automatic Day/Night Mirror Signal	2	0.35	OG/WH	1690	II	—

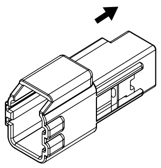
3	0.35	BK/BN	3393	I	—	Driver Mirror Position Sensor Low Reference	3	0.35	BK/BN	3393	II	—
4	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	4	0.5	GY/WH	3411	II	—
5	0.5	BK	1150	I	—	Ground	5	0.5	BK	1150	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	WH/YE	3395	I	—	Driver Mirror Position Sensor Left (-) Right (+) Signal	7	0.35	WH/YE	3395	II	—
8	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	8	0.5	BN/OG	2267	II	—
9	0.5	VT/D-BU	3390	I	—	Driver Mirror Motor Up (+) Down (-) Control	9	0.5	VT/D-BU	3390	II	—
10	0.5	BN/BK	3389	I	—	Driver Mirror Motor Right (+) Left (-) Control	10	0.5	BN/BK	3389	II	—
11	0.5	BK	1150	I	—	Ground	11	0.5	BK	1150	II	—
12	0.5	YE/BN	3391	I	—	Driver Mirror Motor Common Control	12	0.5	YE/BN	3391	II	—
13	0.5	D-BU/WH	1314	I	—	Left Front Turn Signal Lamp Control	13	0.5	D-BU/WH	1314	II	—
		GY/BN	3394	I	—	Driver Mirror Position			GY/BN	3394	II	—

14	0.35					Sensor Up (+) Down (-) Signal	14	0.35				
15	0.35	GY/YE	5853	I	—	Driver Side Object Detection LED Signal 1	15	0.35	GY/YE	5853	II	—
16	0.35	BK/YE	1691	I	—	Automatic Day/Night Mirror Low Reference	16	0.35	BK/YE	1691	II	—
17	0.35	VT/RD	3392	I	—	Driver Mirror Position Sensor 5V Reference	17	0.35	VT/RD	3392	II	—
18	0.5	WH	3412	I	—	Driver Mirror Motor Fold In Control	18	0.5	WH/GN	3412	II	—

X515 Left Outside Rearview Mirror Camera Jumper Harness to Driver Door Harness

—





Connector Part Information

Harness Type: Left Outside Rearview Mirror Camera Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Driver Door

OEM Connector: 33282516

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 1.2 Series (BK)

Terminal Part Information

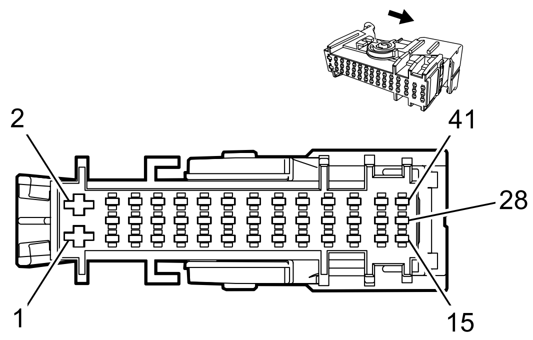
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-17 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

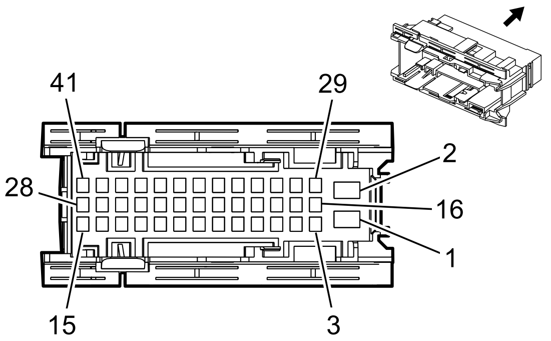
X515 Left Outside Rearview Mirror Camera Jumper Harness to Driver Door Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	WH	2628	I	—	Left Side Vision Camera Video Signal (+)	1	0.35	WH/GN	2628	II	—
2	0.35	BK	2624	I	—	Left Side Vision Camera Video Drain Wire	2	0.35	BK	2624	II	—
4	0.35	GY	2625	I	—	Left Side Vision Camera Video Signal (-)	4	0.35	GY/GN	2625	II	—
5	0.35	BK/WH	2551	I	—	Signal Ground	5	0.35	BK/WH	2551	II	—

6	0.5	WH/BN	6201	I	—	Camera Control	6	0.5	WH/BN	6201	II	—

X600 Passenger Door Harness to Body Harness





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13600509

Service Connector: Service by Harness - See Part Catalog

Description: 41-Way F 4.8 Timer, 1.5 DSQ Series

Connector Part Information

Harness Type: Body

OEM Connector: 13946876

Service Connector: 13587760

Description: 41-Way M 1.5, 2.8 Series (GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VII	13575857	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
VIII	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

X600 Passenger Door Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option

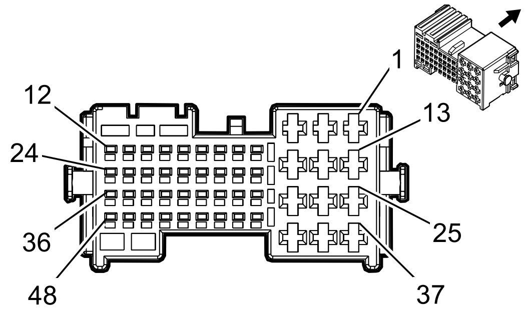
				ID							ID	
1	2.5	RD/WH	1340	II	—	Battery Positive Voltage	1	2.5	RD/WH	1340	VIII	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	VII	—
3	0.5	GY/GN	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	3	0.5	GY/GN	5996	V	—
4	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	4	0.5	WH	3398	V	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	—	—	—	—	—	Indicator Dimming Control	6	0.35	WH	6816	IV	—
7	0.5	WH/GN	3412	I	—	Driver Mirror Motor Fold In Control	7	0.5	WH/GN	3412	V	—
8	0.5	GY/WH	3411	I	—	Driver Mirror Motor Fold Out Control	8	0.5	GY/WH	3411	V	—
9	0.75	VT/BN	1952	I	—	Right Front Tweeter Speaker (-) Low Reference	9	0.75	VT/BN	1952	VI	—
10	1	YE/BK	117	I	—	Right Front Speaker Signal (-) 1 Right Front Speaker Signal (-) 1	10	0.75 1	YE/BK YE/BK	117 117	VI III	— —
11	0.5	RD/D-BU	840	I	—	Battery Positive Voltage	11	0.5	RD/D-BU	840	V	—

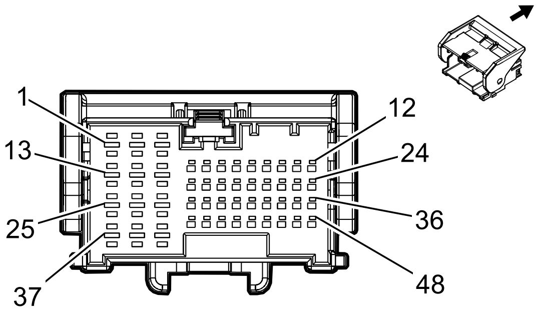
11	0.5						11	0.5			
12	0.35	WH/D-BU	2627	I	—	Right Side Vision Camera Video Signal (+)	12	0.35	WH/D-BU	2627	IV	—
13	0.35	GY/D-BU	2626	I	—	Right Side Vision Camera Video Signal (-)	13	0.35	GY/D-BU	2626	IV	—
14	0.5	OG/GN	2134	I	—	Right Front Side Impact Sensing Module Signal	14	0.35	BN/OG	2134	IV	—
15	0.5	BK/OG	6629	I	—	Right Front Side Impact Sensing Module Low Reference	15	0.35	BK/OG	6629	IV	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.35	BN/VT	245	I	—	Passenger Door Lock Switch Unlock Control	17	0.35	BN/VT	245	IV	—
18	0.35	YE/BK	244	I	—	Passenger Door Lock Switch Lock Control	18	0.35	YE/VT	244	IV	—
19	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	19	0.75	BN/YE	294	VI	—
20	0.75	GY	295	I	—	Door Lock Actuator Lock Control	20	0.75	GY	295	VI	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.75	BN/GN	1852	I	—	Right Front Tweeter Speaker Control (+)	22	0.75	BN/GN	1852	VI	—
23	1	YE	200	I	—	Right Front Speaker Control (+) 1	23	0.75	YE	200	VI	—

						Right Front Speaker Control (+) 1		1	YE	200	III	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.35	VT/WH	3571	I	—	Passenger Door Handle Switch Signal	25	0.35	VT/WH	3571	IV	—
26	0.5	BARE	2623	I	—	Right Side Vision Camera Video Drain Wire	26	0.35	BARE	2623	IV	—
27	0.35	GN/BK	3563	I	—	Passive Entry Passenger Door Antenna Signal Lo	27	0.35	GN/BK	3563	IV	—
28	0.35	GN/YE	3562	I	—	Passive Entry Passenger Door Antenna Signal Hi	28	0.35	GN/YE	3562	IV	—
29	—	—	—	—	—	LED Backlight Dimming Control	29	0.5	YE	6817	V	—
30	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	30	0.35	WH/YE	7557	IV	—
31	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	31	0.5	BN/YE	2267	V	—
32	—	—	—	—	—	Not Occupied	32	—	—	—	—	—
33	0.5	GN/YE	6134	I	—	Local Interconnect Network Serial Data Bus 3	33	0.5	GN/YE	6134	V	—
34	0.5	GN/WH	7530	I	—	Local Interconnect Network Serial Data Bus 8	34	0.5	GN/WH	7530	V	—

35	0.5	WH/BN	6201	I	—	Camera Control	35	0.5	WH/BN	6201	V	—
36	0.5	GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	36	0.5	GN/BK	3396	V	—
37	0.35	GY	5861	I	—	Passenger Side Object Detection LED Signal 1	37	0.35	GY	5861	IV	—
38	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	38	0.5	YE/VT	3397	V	—
39	0.75	BN	5910	I	—	Door Double Lock Actuator Lock Control	39	0.75	BN	5910	VI	—
40	0.35	BK/WH	2551	I	—	Signal Ground	40	0.35	BK/WH	2551	IV	—
41	0.5	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	41	0.75	GN/VT	1315	VI	—

X605 Passenger Door Harness to Passenger Door Trim Harness





Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13889713

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way F 1.2 MCON, 2.8 MCP Series

Connector Part Information

Harness Type: Passenger Door Trim

OEM Connector: 15512031

Service Connector: Service by Harness - See Part Catalog

Description: 48-Way M 1.2 MCON, 2.8 MCP Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-13 (BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-5 (PU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X605 Passenger Door Harness to Passenger Door Trim Harness

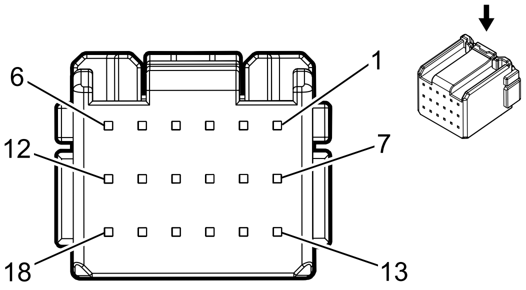
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE	6817	II	—	LED Backlight Dimming Control	1	0.35	YE	6817	IV	—

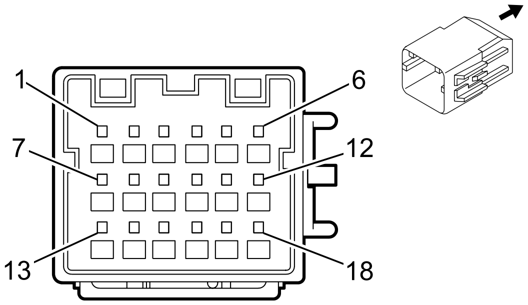
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	IV	—
3 - 5	—	—	—	—	—	Not Occupied	3 - 5	—	—	—	—	—
6	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	6	0.75	YE/VT	3397	III	—
7	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	7	0.75	WH	3398	III	—
8	0.5	YE/GY	3413	I	—	Passenger Mirror Motor Fold Out Control	8	0.75	YE/WH	3413	III	—
9	0.5	D-BU/GY	3414	I	—	Passenger Mirror Motor Fold In Control	9	0.75	D-BU/GY	3414	III	—
10	0.35	D-BU/YE	3401	I	—	Passenger Mirror Position Sensor Up (+) Down (-) Signal	10	0.35	D-BU/YE	3401	III	—
11	0.5	GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	11	0.75	GN/BK	3396	III	—
12	0.35	YE/RD	3399	I	—	Passenger Mirror Position Sensor 5V Reference	12	0.35	YE/RD	3399	III	—
13	0.35	VT/WH	3403	II	—	Passenger Mirror Position Sensor Left (-) Right (+) Signal	13	0.35	VT/WH	3403	IV	—
14	0.35	BK/GN	3400	II	—	Passenger Mirror Position Sensor Low Reference	14	0.35	BK/GN	3400	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
		BK	1250	I	—	Ground			BK	1250	III	—

17	0.5						17	0.35				
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	0.75	BN/GN	1852	I	—	Right Front Tweeter Speaker Control (+)	20	—	—	—	—	—
21	0.75	VT/BN	1952	I	—	Right Front Tweeter Speaker (-) Low Reference	21	—	—	—	—	—
22	0.5	RD/D-BU	840	I	—	Battery Positive Voltage	22	0.5	RD/D-BU	840	III	—
23 - 28	—	—	—	—	—	Not Occupied	23 - 28	—	—	—	—	—
29	0.35	BN/YE	167	I	—	Power Window Master Switch Right Front Down Signal	29	0.35	BN/YE	167	III	—
30	0.35	YE/BK	166	I	—	Power Window Master Switch Right Front Up Signal	30	0.35	YE/BK	166	III	—
31	0.35	VT/GY	2765	I	—	Power Window Switch Right Front Express Signal	31	0.35	VT/GY	2765	III	—
32 - 36	—	—	—	—	—	Not Occupied	32 - 36	—	—	—	—	—
37	0.5	GN/WH	7530	II	—	Local Interconnect Network Serial Data Bus 8	37	0.5	GN/WH	7530	IV	—
38	1	YE/BK	117	II	—	Right Front Speaker Signal (-) 1	38	—	—	—	—	—
39	1	YE	200	II	—	Right Front Speaker Control (+) 1	39	—	—	—	—	—
40 - 46	—	—	—	—	—	Not Occupied	40 - 46	—	—	—	—	—

47	0.35	BN/VT	245	I	—	Passenger Door Lock Switch Unlock Control	47	0.35	BN/VT	245	III	—
48	0.35	YE/BK	244	I	—	Passenger Door Lock Switch Lock Control	48	0.35	YE/VT	244	III	—

X610 Outside Rearview Mirror Harness to Passenger Door Harness





Connector Part Information

Harness Type: Outside Rearview Mirror

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 18-Way F

Connector Part Information

Harness Type: Passenger Door

OEM Connector: 13888973

Service Connector: Service by Harness - See Part Catalog

Description: 18-Way M 0.64 Series (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-65B (LT BU)	No Tool Required	Not Required	Not Required	Not Required	Not Required

X610 Outside Rearview Mirror Harness to Passenger Door Harness

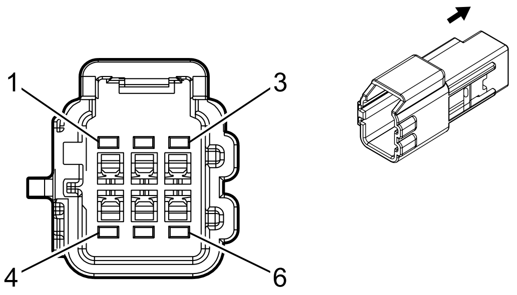
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	1	0.5	GY/GN	5996	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BK	3400	I	—	Passenger Mirror	3	0.35	BK/GN	3400	II	—

3	0.35					Position Sensor Low Reference	3	0.35				
4	0.5	YE/GY	3413	I	—	Passenger Mirror Motor Fold Out Control	4	0.5 0.5	GY/WH YE/GY	3411 3413	II II	DL3/DL8/DPN/DQS/DR4-A45 A45+DL3/DR4
5	0.5	BK	1250	I	—	Ground	5	0.5	BK	1250	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	VT/WH	3403	I	—	Passenger Mirror Position Sensor Left (-) Right (+) Signal	7	0.35	VT/WH	3403	II	—
8	0.5	BN/OG	2267	I	—	Mirror Heating Element Control	8	0.5	BN/OG	2267	II	—
9	0.5	YE/VT	3397	I	—	Passenger Mirror Motor Up (+) Down (-) Control	9	0.5	YE/VT	3397	II	—
10	0.5	GN/BK	3396	I	—	Passenger Mirror Motor Right (+) Left (-) Control	10	0.5	GN/BK	3396	II	—
11	0.5	BK	1250	I	—	Ground	11	0.5	BK	1250	II	—
12	0.5	WH	3398	I	—	Passenger Mirror Motor Common Control	12	0.5	WH	3398	II	—
13	0.5	GN/VT	1315	I	—	Right Front Turn Signal Lamp Control	13	0.5	GN/VT	1315	II	—

14	0.35	D-BU/YE	3401	I	—	Passenger Mirror Position Sensor Up (+) Down (-) Signal	14	0.35	D-BU/YE	3401	II	—
15	0.35	GY	5861	I	—	Passenger Side Object Detection LED Signal 1	15	0.35	GY	5861	II	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.35	YE/RD	3399	I	—	Passenger Mirror Position Sensor 5V Reference	17	0.35	YE/RD	3399	II	—
18	0.5	D-BU/GY	3414	I	—	Passenger Mirror Motor Fold In Control	18	0.5 0.5	D-BU/GY WH/GN	3414 3412	II II	A45+DL3/DR4 DL3/DL8/DPN/DQS/DR4-A45

X615 Outside Rearview Mirror Jumper Harness to Passenger Door Harness

—



Connector Part Information

Harness Type: Outside Rearview Mirror Jumper

OEM Connector: —

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F

Connector Part Information

Harness Type: Passenger Door

OEM Connector: 33282516

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 1.2 Series (BK)

Terminal Part Information

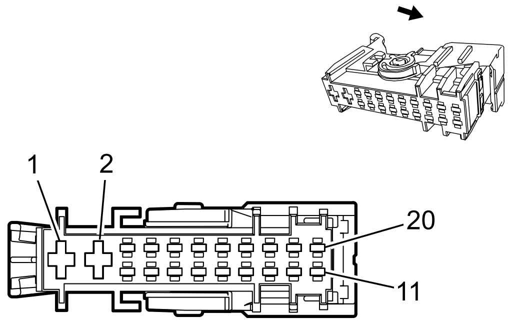
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	Not Available	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-17 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required

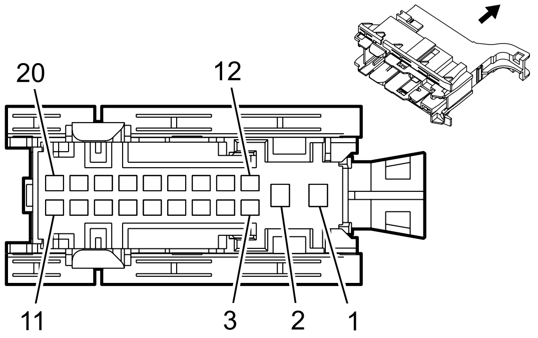
X615 Outside Rearview Mirror Jumper Harness to Passenger Door Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	GY/D-BU	2626	I	—	Right Side Vision Camera Video Signal (-)	1	0.35	GY/D-BU	2626	II	—
2	0.35	BK	2623	I	—	Right Side Vision Camera Video Drain Wire	2	0.35	BK	2623	II	—
4	0.35	WH/D-BU	2627	I	—	Right Side Vision Camera Video Signal (+)	4	0.35	WH/D-BU	2627	II	—
5	0.35	BK/WH	2551	I	—	Signal Ground	5	0.35	BK/WH	2551	II	—

6	0.5	WH/BN	6201	I	—	Camera Control	6	0.5	WH/BN	6201	II	—

X700 Left Rear Door Harness to Body Harness





Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 13600493

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 1.5 DSQ, 4.8 Timer Series (GY)

Connector Part Information

Harness Type: Body

OEM Connector: 15539528

Service Connector: 19329469

Description: 20-Way M 1.5, 5.8 TTS Series (D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575706	J-35616-42 (RD)	J-38125-36	Not Available	Not Available	Not Available	Not Available
V	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VII	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VIII	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

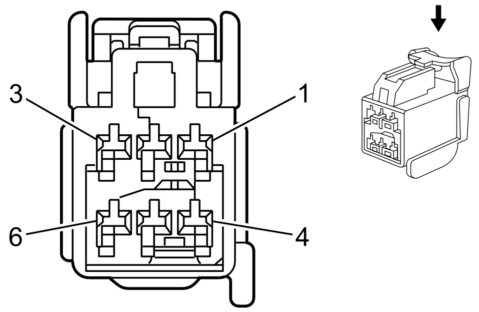
X700 Left Rear Door Harness to Body Harness

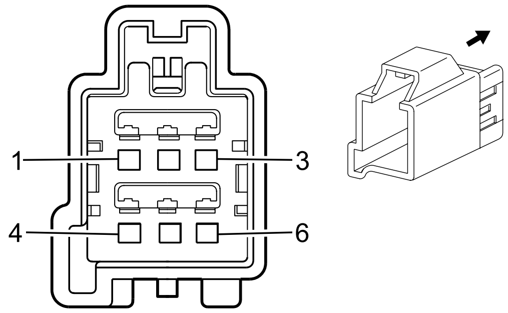
Pin	Size	Color	Circuit	Terminal Type	Option	Function	Pin	Size	Color	Circuit	Terminal Type	Option

				ID							ID	
1	2.5	RD/D-BU	1842	II	—	Battery Positive Voltage	1	2.5	RD/D-BU	1842	VIII	—
2	3	BK	1150	II	—	Ground	2	4	BK	1150	IV	—
3	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	3	0.35	WH/YE	7557	V	—
4 - 6	—	—	—	—	—	Not Occupied	4 - 6	—	—	—	—	—
7	1	GN	199	I	—	Left Rear Speaker Control (+) Left Rear Speaker Control (+)	7	0.5 1	GN GN	199 199	VI III	— —
8	0.35	BN/YE	6157	I	—	Left Rear Door Handle Switch Signal	8	0.35	BN/YE	6157	V	—
9	0.75	WH/D-BU	3266	I	—	Child Security Lock Motor Lock Control	9	0.75	WH/D-BU	3266	VII	—
10	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	10	0.75	BN/YE	294	VII	—
11	0.75	GY	295	I	—	Door Lock Actuator Lock Control	11	0.75	GY	295	VII	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.75	BN	5910	I	—	Door Double Lock Actuator Lock Control	13	0.75	BN	5910	VII	—

14	0.5	GY/GN	5996	I	—	Driver Outside Rear View Mirror Puddle Lamp Control	14	0.5	GY/GN	5996	VI	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1	GN/BK	116	I	—	Left Rear Speaker Signal (-) Left Rear Speaker Signal (-)	16	0.5 1	GN/BK GN/BK	116 116	VI III	— —
17 - 18	—	—	—	—	—	Not Occupied	17 - 18	—	—	—	—	—
19	0.35	BN/WH	3269	I	—	Child Security Lock Motor Status Signal Left Rear	19	0.35	BN/WH	3269	V	—
20	0.5	GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	GN/GY	6135	VI	—

X705 Left Rear Door Harness to Left Rear Door Trim Harness





Connector Part Information

Harness Type: Left Rear Door

OEM Connector: 10846805

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Left Rear Door Trim

OEM Connector: 10846804

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 1.5 Series (L-GY)

Terminal Part Information

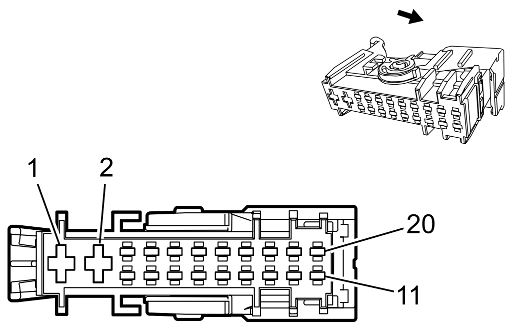
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

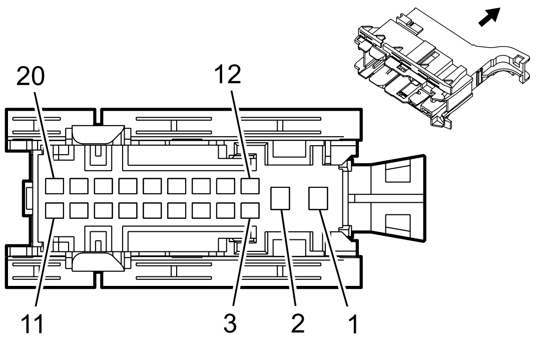
X705 Left Rear Door Harness to Left Rear Door Trim Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	WH/YE	7557	II	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	III	—

3	0.75	GN/BK	116	I	—	Left Rear Speaker Signal (-)	3	0.75	GN/BK	116	III	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BK	1150	II	—	Ground	5	0.35	BK	1150	III	—
6	0.75	GN	199	I	—	Left Rear Speaker Control (+)	6	0.75	GN	199	III	—

X800 Right Rear Door Harness to Body Harness





Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 13600493

Service Connector: Service by Harness - See Part Catalog

Description: 20-Way F 1.5 DSQ, 4.8 Timer Series (GY)

Connector Part Information

Harness Type: Body

OEM Connector: 15539528

Service Connector: 19329469

Description: 20-Way M 1.5, 5.8 TTS Series (D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	13575556	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
IV	13575775	J-35616-34 (YE)	J-38125-560	Not Available	Not Available	Not Available	Not Available
V	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	2
VI	13575776	J-35616-34 (YE)	J-38125-560	964265-2	Lear 28	E	C
VII	13582220	J-35616-14 (GN)	J-38125-560	Not Available	Not Available	Not Available	Not Available

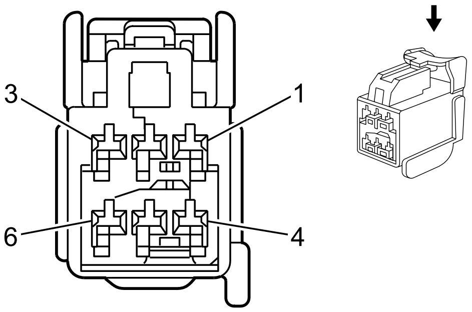
X800 Right Rear Door Harness to Body Harness

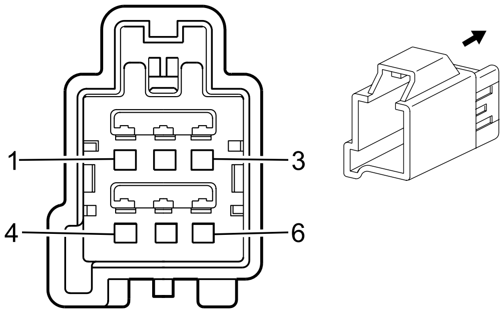
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option

1	2.5	RD/WH	1340	II	—	Battery Positive Voltage	1	2.5	RD/WH	1340	VII	—
2	2.5	BK	1250	II	—	Ground	2	2.5	BK	1250	VII	—
3	0.35	WH/YE	7557	I	—	LED Ambient Lighting Control 1	3	0.35	WH/YE	7557	IV	—
4 - 6	—	—	—	—	—	Not Occupied	4 - 6	—	—	—	—	—
7	1	WH	46	I	—	Right Rear Speaker Control (+)	7	0.5	WH	46	V	—
						Right Rear Speaker Control (+)		1	WH	46	III	—
8	0.35	YE/GY	6158	I	—	Right Rear Door Handle Switch Signal	8	0.35	YE/GY	6158	IV	—
9	0.75	WH/D-BU	3266	I	—	Child Security Lock Motor Lock Control	9	0.75	WH/D-BU	3266	VI	—
10	0.75	BN/YE	294	I	—	Door Lock Actuator Unlock Control	10	0.75	BN/YE	294	VI	—
11	0.75	GY	295	I	—	Door Lock Actuator Lock Control	11	0.75	GY	295	VI	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.75	BN	5910	I	—	Door Double Lock Actuator Lock Control	13	0.75	BN	5910	VI	—
14	0.5	GY/GN	5996	I	—	Driver Outside Rear View Mirror Puddle	14	0.5	GY/GN	5996	V	—

						Lamp Control					
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1	D-BU/BK	115	I	—	Right Rear Speaker Signal (-)	16	0.5	D-BU/BK	115	V	—
						Right Rear Speaker Signal (-)		1	D-BU/BK	115	III	—
17 - 18	—	—	—	—	—	Not Occupied	17 - 18	—	—	—	—	—
19	0.35	GY/BK	3268	I	—	Child Security Lock Motor Status Signal Right Rear	19	0.35	GY/BK	3268	IV	—
20	0.5	GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	20	0.5	GN/GY	6135	V	—

X805 Right Rear Door Harness to Right Rear Door Trim Harness





Connector Part Information

Harness Type: Right Rear Door

OEM Connector: 10846805

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 1.5 Kaizen Series (L-GY)

Connector Part Information

Harness Type: Right Rear Door Trim

OEM Connector: 10846804

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M 1.5 Series (L-GY)

Terminal Part Information

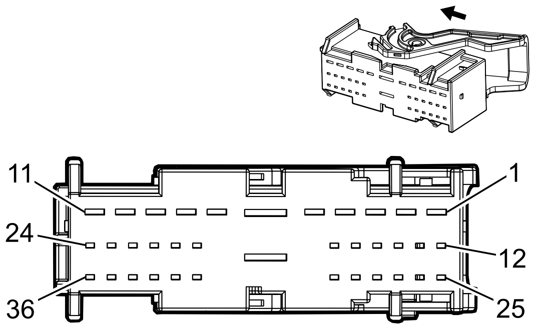
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-2A (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-14 (GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	Not Required	J-35616-3 (GY)	No Tool Required	Not Required	Not Required	Not Required	Not Required

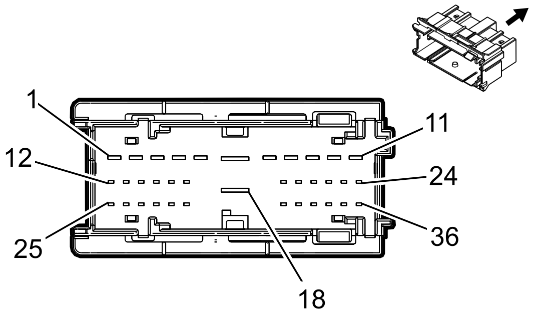
X805 Right Rear Door Harness to Right Rear Door Trim Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	—	—	—	—	—	LED Ambient Lighting Control 1	2	0.35	WH/YE	7557	III	—

3	0.75	D-BU/BK	115	I	—	Right Rear Speaker Signal (-)	3	0.75	D-BU/BK	115	IV	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	BK	1250	II	—	Ground	5	0.35	BK	1250	III	—
6	0.75	WH	46	I	—	Right Rear Speaker Control (+)	6	0.75	WH	46	IV	—

X900 Liftgate Harness to Body Harness





Connector Part Information

- Harness Type: Liftgate
- OEM Connector: 33196212
- Service Connector: Service by Harness - See Part Catalog
- Description: 36-Way F 1.2 Multilock, 2.8, 6.3 YESC Series (GY)

Connector Part Information

- Harness Type: Body
- OEM Connector: 13933751
- Service Connector: 19329821
- Description: 36-Way M 1.5, 2.8, 6.3 Series, Sealed

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool	Service Terminal	Tray Name	Core Crimp	Insulation Crimp
I	Not Required	J-35616-16 (LT GN)	No Tool Required	Not Required	Not Required	Not Required	Not Required
II	Not Required	J-35616-35 (VT)	No Tool Required	Not Required	Not Required	Not Required	Not Required
III	Not Required	J-35616-42 (RD)	No Tool Required	Not Required	Not Required	Not Required	Not Required
IV	13575823	J-35616-5 (PU)	J-38125-11A	7114-4110-02	Yazaki 9	E	C
V	13575823	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VI	13575824	J-35616-5 (PU)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
VII	13578908	J-35616-5 (PU)	J-38125-11A	7114-4112-02	Yazaki 9	C	D
VIII	13580023	J-35616-43 (RD)	J-38125-11A	Not Available	Not Available	Not Available	Not Available
IX	19329830	J-35616-13 (BU)	J-38125-12A	Not Available	Not Available	Not Available	Not Available

X900 Liftgate Harness to Body Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	3	RD/GY	7040	II	—	Battery Positive Voltage	1	3	RD/GY	7040	VII	—
2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
4	1	BK	1450	II	—	Ground	4	1.5	BK	1450	VI	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	2.5	BN/VT	293	III	—	Rear Defog Element Control	6	2.5	BN/VT	293	VIII	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.75	RD/YE	3040	II	—	Battery Positive Voltage	8	0.75	RD/YE	3040	V	—
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	0.5	GN/YE	6846	II	—	Rear License Lamp Control	10	0.5	GN/YE	6846	IV	—
11	3	BK	1450	II	—	Ground	11	3	BK	1450	VII	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	13	0.5	GN	5060	IX	—
14	0.5	GY/BK	6113	I	—	Rear Lift Gate Open/Close Switch Signal	14	0.35	GY/BK	6113	IX	—
15	0.5	GN/D-BU	6112	I	—	Power Lift Gate On/Off Switch Signal	15	0.35	GN	6112	IX	—

16 - 17	—	—	—	—	—	Not Occupied	16 - 17	—	—	—	—	—
18	2.5	BK	1450	III	—	Ground	18	2.5	BK	1450	VIII	—
19	0.5	D-BU/WH	6128	I	—	Rear Closure Unlatch Motor Unlatch Control	19	0.5	D-BU/WH	6128	IX	—
20	0.35	BK	2550	I	—	Signal Ground Ground	20	0.35 0.75	BK/WH BK	2551 2550	IX IX	— —
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.5	RD/D-BU	840	I	—	Battery Positive Voltage	22	0.5	RD/D-BU	840	IX	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.35	YE/D-BU	5797	I	—	Rear Closure Handle Switch Open Signal	24	0.35	YE/D-BU	5797	IX	—
25	0.5	D-BU/YE	6795	I	—	Lift Glass/Rear Compartment Lid Motor Release Control 2	25	0.5	D-BU/YE	6795	IX	—
26	0.35	GY/GN	6190	I	—	Lift Glass/Rear Compartment Lid Exterior Release Signal	26	0.35	GY/GN	6190	IX	—
27	0.5	GN/BN	4118	I	—	Local Interconnect Network Serial Data Bus 18	27	0.5	GN/BN	4118	IX	—
28	0.35	VT/GY	1303	I	—	Lift Gate Ajar Switch Signal 1	28	0.35	VT/GY	1303	IX	—

29	0.5	YE/OG	5797	I	—	Rear Closure Handle Switch Open Signal	29	—	—	—	—	—
30	0.5	GN/GY	6135	I	—	Local Interconnect Network Serial Data Bus 4	30	0.5	GN/GY	6135	IX	—
31	—	—	—	—	—	Not Occupied	31	—	—	—	—	—
32	0.35	VT/GN	1739	I	—	Camera Control Run/Crank Ignition 1 Voltage	32	0.35 0.5	WH/BN VT/GN	6201 1739	IX IX	— —
33	0.35	WH/D-BU	6973	I	—	Camera Rear Vision Signal (-) Camera Signal 2	33	0.35 0.35	WH WH/D-BU	7642 6973	IX IX	— —
34	0.35	GY/YE	6972	I	—	Camera Rear Vision Signal + Camera Signal 2 +	34	0.35 0.35	D-BU GY/YE	7641 6972	IX IX	— —
35	0.35	BARE	6974	I	—	Camera Shield Ground Camera Low Reference	35	0.35 0.35	BARE BARE	6799 6974	IX IX	— —
36	0.35	GN/WH	24	I	—	Backup Lamp Control	36	0.35	GN/WH	24	IX	—

Description and Operation

Electronic Park Lock Description and Operation

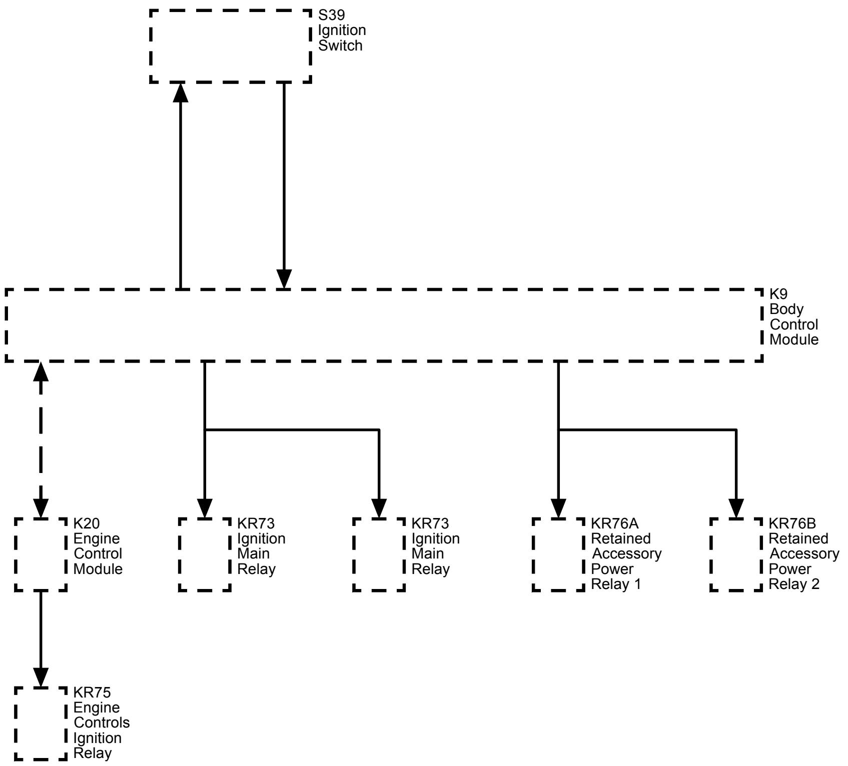
If the vehicle is equipped with automatic transmission and an ignition mode switch, it has an electronic park lock system. The electronic park lock system purpose is to prevent the ignition from being switched to the OFF position when the transmission is in any position other than PARK and the vehicle may still be moving. The electronic park lock system incorporates the park position switch that located in the A/T shift lock control switch. When the transmission shift selector is in PARK, the park position switch closes and the BCM allows the ignition to be turned OFF.

If the vehicle is not in PARK, the ignition will return to ACC/ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center. When the vehicle is shifted into PARK, the ignition system will switch to OFF.

Power Mode Description and Operation (Without BTM)

Serial Data Power Mode Master

Power Moding Description and Operation Block Diagram



Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle's body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition switch is a low current switch with multiple discrete ignition switch signals to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (Off, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The power mode master receives ignition switch signals to identify the operators desired power mode. The Power Mode Parameter tables below illustrate the correct state of these input parameters (circuits) in correspondence to the ignition switch position:

Power Mode Parameters

Ignition Switch Position	Power Mode Transmitted	Ign. Off/Run/Crank (Off/Run Crank Voltage Circuit)	Ignition Accessory/Run (Accessory Voltage Circuit)	Ignition Run/Crank (Ignition 1 Voltage Circuit)
Off Key Out	Off	Key Out / ACC	Inactive	Inactive
Off Key IN	Off	Key In / Off	Inactive	Inactive
Accessory	Accessory	Key Out / ACC	Active	Inactive

Run	Run	Run	Active	Active
Start	Crank Request	Crank	Inactive	Active

Relay Controlled Power Mode

The BCM uses the discrete ignition switch inputs Off/Run/Crank Voltage, Accessory Voltage, and Ignition 1 Voltage, to distinguish the correct power mode. The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay 1 and retained accessory power relay 2 remain on for a timed period after the Ignition key is removed. Refer to Retained Accessory Power Description and Operation (With BTM)Retained Accessory Power Description and Operation (Without BTM) for more information on the retained accessory power function.

Battery Saver Mode (Transport Mode)

Battery saver mode (transport mode) reduces the parasitic load of some modules during overseas shipment or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may have reduced functionality while in the battery saver mode, such as disabling keyless entry, afterblow, and content theft features. Battery saver mode is initiated by turning on the hazard flashers, applying the brake pedal, and then turning the ignition key to the start position or pushing the ignition mode switch with the foot on the brake for greater than 15 seconds. The mode is disengaged by repeating the previous process. The driver information center (if equipped) will display Transport Mode is On when battery saver mode is enabled and Transport Mode is Off when battery saver mode is disabled. For vehicles not equipped with a driver information center, the battery indicator light will constantly flash on the Instrument Cluster when battery saver mode is enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

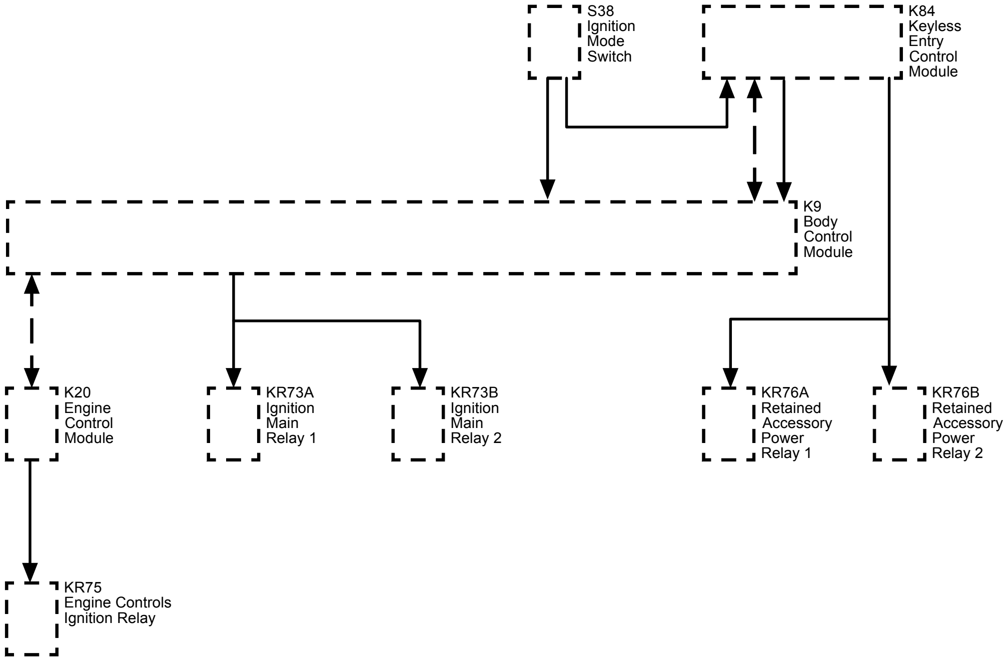
- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

Power Mode Description and Operation (With BTM)

Serial Data Power Mode Master

Power Moding D&O Block Diagram



Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle's body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition mode switch is a low current switch with a discrete ignition signal to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (OFF, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The keyless entry control module also monitors voltage on the switch in the same manner as the BCM, but monitors the second switch located in the ignition mode switch. The keyless entry control module also controls the backup power through the run/crank coil control circuit by applying voltage to the ignition voltage circuit. This circuit is a pass-thru in the BCM and will energize the ignition circuit when the appropriate power mode is required.

The power mode master receives ignition switch or ignition mode switch signals to identify the operators desired power mode. The Power Mode Parameter tables below illustrate the correct state of these input parameters (circuits) in correspondence to the ignition switch position or ignition mode switch with the transmitter to vehicle range:

Power Mode Parameters

Power Mode	Power Mode Transmitted	Push Button Ignition Switch (Power Button Switch Circuit Input to the BCM)	Push Button Ignition Switch Voltage Push Button Ignition Switch Voltage Input to the BCM	Key in Cylinder Switch/Key Fob in Vehicle (Transmitter in Range to the BCM Signal)
Transmitter in Range	OFF	Inactive	9 V	Yes

Transmitter out of Range	OFF	Inactive	9 V	No
Vehicle On Power Mode, then Press the Power Button Switch (Foot on or OFF the Brake Pedal) Transmitter in Vehicle	OFF	Active (pushed) / Inactive (not pushed)	5-6 V (pressed)	Yes
Vehicle OFF Power Mode, then Press the Power Button Switch with foot OFF the Brake Pedal; Transmitter in Vehicle	Accessory Mode	Active (pushed) / Inactive (not pushed)	5-6 V (pressed)	Yes
Vehicle OFF Power Mode, then Press the Power Button Switch with foot on the Brake Pedal; Transmitter in Vehicle	Vehicle in Run/Start Mode (Ignition ON engine running.)	Active (pushed) / Inactive (not pushed)	5-6 V (pressed)	Yes
Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 5 s with foot OFF the Brake Pedal; Transmitter in Vehicle	Vehicle in Run/Start Mode (Ignition ON without the engine running)	Active (pushed) / Inactive (not pushed)	5-6 V (pressed)	Yes
Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 10 s with foot OFF the Brake Pedal; Transmitter in Vehicle	Vehicle In Service Mode (Ignition ON without the engine running)	Active (pushed) / Inactive (not pushed)	5-6 V (pressed)	Yes

Relay Controlled Power Mode

The BCM and keyless entry control module use discrete push button switch inputs, transmitter in range status, current power mode state, transmission shift lever position, and brake pedal position state to distinguish the correct power mode (OFF, Accessory Mode, Vehicle in Run/Start Mode). The BCM and keyless entry control module, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay remains on for a timed period after the Ignition is turned OFF. Refer to Retained Accessory Power Description and Operation (With BTM)Retained Accessory Power Description and Operation (Without BTM) for more information on the retained accessory power function.

Push Button Start

The ignition mode switch has 2 LEDs that indicate the vehicle power mode. When the vehicle is in the OFF mode, both LED’s will be OFF. Momentarily pressing the ignition mode switch button once (brake pedal not applied), will enter the vehicle into accessory mode and the amber LED (ACC) will illuminate. The accessory mode has a 10 min time out to reduce battery drain. With the ignition OFF (brake pedal not applied) then pressing and holding the push button start switch for 5 s will place the vehicle in run/start mode (Ignition ON without the engine running). The vehicle will stay powered up for 3 hours and the green LED (Run/Start) will illuminate. After being in run/start mode (ignition ON without the engine running) for 1.5 hours, the vehicle will look to see if the transmitter is still present. If the transmitter is not present in the vehicle, it will power down instead of staying powered up for the full 3 hours. With the ignition OFF, (brake pedal not applied) then pressing and holding the push button start switch for at least 10 s will place the vehicle into Vehicle In Service Mode (Ignition ON without the engine running) and the green LED (Run/Start) will illuminate. Vehicle In Service Mode is used for service and diagnostics not requiring the operation of the gas engine. The vehicle will stay in Vehicle In Service mode until the vehicle is manually turned OFF.

With the ignition OFF (brake pedal applied), pressing the ignition mode switch button once, the vehicle will enter run/start mode and the green LED (Run/Start) will illuminate. This will start the engine. If the vehicle is left in PARK with the engine running and the transmitter out of the vehicle, the vehicle will automatically turn off after 1.5 hours. If the vehicle is left in PARK with the engine running and the transmitter in the vehicle, the vehicle will automatically turn OFF after 3 hours. The timer will stop when the vehicle is shifted out of PARK and the timer will reset after the vehicle is placed back in PARK with the engine running.

Both LED’s have the voltage supplied from the body control module (BCM). The ignition mode switch sends the ignition mode switch status to the passive entry passive start module (PEPS) and to the BCM. The PEPS module sends a redundant signal to the BCM with the ignition mode switch status.

Battery Saver Mode (Transport Mode)

Battery saver mode (transport mode) reduces the parasitic load of some modules during overseas shipment or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may have reduced functionality while in the battery saver mode, such as disabling keyless entry, afterblow, and content theft features. Battery saver mode is initiated by turning on the hazard flashers, applying the brake pedal, and then turning the ignition key to the start position or pushing the ignition mode switch with the foot on the brake for greater than 15 s. The mode is disengaged by repeating the previous process. The driver information center (if equipped) will display Transport Mode is On when battery saver mode is enabled and Transport Mode is OFF when battery saver mode is disabled. For vehicles not equipped with a driver information center, the battery indicator light will constantly flash on the Instrument Cluster when battery saver mode is enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

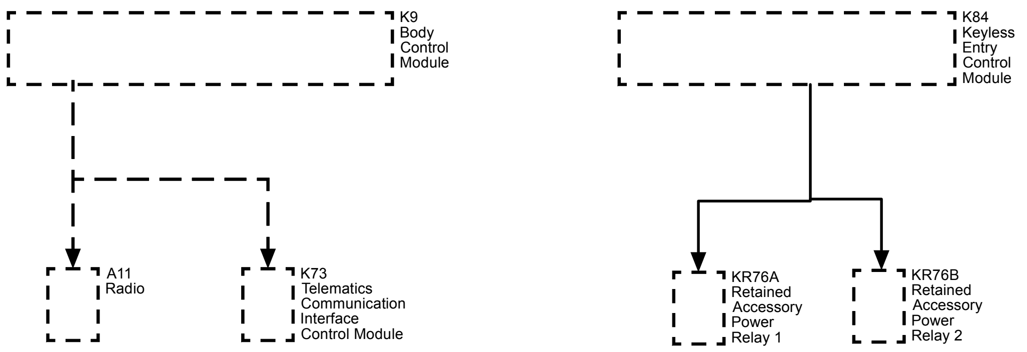
- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

Retained Accessory Power Description and Operation (With BTM)

Retained Accessory Power

RAP D&O with BTM Block Diagram



The body control module (BCM) monitors the ignition position, battery condition, and each door ajar/open switch status to determine whether the retained accessory power should be initiated or terminated. Retained accessory power is controlled by two different methods; retained accessory power relay coil control circuit and serial data. Some modules receive a retained accessory power message from the BCM over the serial data circuits. Serial data controlled retained accessory power is deactivated as required by their modules retained accessory power mode operation. Other subsystems may be activated directly by the BCM or by the BCM through a relay. Components and systems that are active in retained accessory power are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

Retained Accessory Power Relay Coil Control Circuit.

The BCM keeps the device or relay energized during all power modes, except Off-Awake and Crank. The device or relay is also energized for approximately 10 min after shutting the ignition OFF, providing no door is opened.

Relay controlled retained accessory power will end when one of the following conditions is met:

- The BCM receives an input from any door ajar or open switch indicating the opening of any door after the ignition key is out of the ignition.

  Note: If the BCM is receiving any door ajar or open signal from those switches when the ignition key is turned OFF, retained accessory power will not initiate.

- The BCM internal timer for the retained accessory power expires after approximately 10 min.
- The BCM detects a decrease in battery capacity below a prescribed limit.

Systems powered by the retained accessory power relay coil control circuit during the retained accessory power mode are as follows:

Note: The vehicle may not be equipped with all components as listed below.

- Accessory Power Receptacle
- Cigarette Lighter Receptacle

- Window Switches
- Sunroof Control Module
- Sunroof Switch
- Mobile Device Wireless Charger Module
- Mobile Telephone Control Module
- Traffic Data Receiver
- Transmission Shift Lever Position Indicator (w/floor mounted console gear shift)
- Seat Heating Control Module

Serial Data Controlled Retained Accessory Power

Retained accessory power systems controlled by serial data are as follows:

Radio

Radio retained accessory power activation/termination is the same as relay operation with one exception; the only door switch that will turn off the radio during retained accessory power is the driver door open switch.

Vehicle Communication Interface Module (VCIM) (Onstar®) (If Equipped)

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode, and keep the radio in RAP mode until the call is terminated.

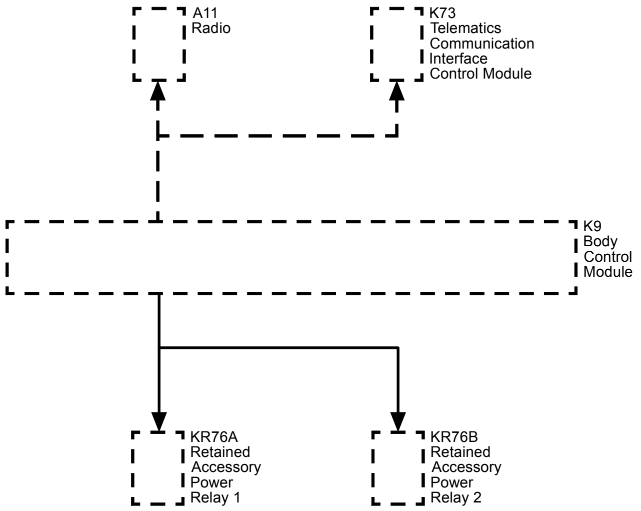
Interruptible Retained Accessory Power

The keyless entry control module controls components in the same manner as BCM relay controlled retained accessory power with one exception; interruptible retained accessory power is deactivated during transmitter authentication. The keyless entry control module will deactivate components that may cause radio frequency (RF) interference when the ignition mode switch is pressed or which may result in “NO REMOTE DETECTED” message displayed on the driver information center.

Retained Accessory Power Description and Operation (Without BTM)

Retained Accessory Power

RAP Description and Operation Block Diagram



The body control module (BCM) monitors the ignition switch position, battery condition, and each door ajar/open switch status to determine whether the retained accessory power should be initiated or terminated. Retained accessory power is controlled by two different methods; relay control and serial data. Some modules receive a retained accessory power message from the BCM over the serial data circuits. Serial data controlled retained accessory power is deactivated as required by their modules retained accessory power mode operation. Other subsystems are activated directly by the BCM through a relay. Components and systems that are active in retained accessory power are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

Relay Controlled Retained Accessory Power

The BCM keeps the retained accessory power relay 1 and retained accessory power relay 2 energized during all power modes, except Off-Awake and Crank. The retained accessory power relay 1 and retained accessory power relay 2 are also energized for approximately 10 minutes after shutting the ignition OFF and removing the key, providing no door is opened.

Relay controlled retained accessory power will end when one of the following conditions is met:

- The BCM receives an input from any door ajar or open switch indicating the opening of any door after the ignition key is out of the ignition.

  Note: If the BCM is receiving any door ajar or open signal from those switches when the ignition key is turned OFF, retained accessory power will not initiate.

- The BCM internal timer for the retained accessory power expires after approximately 10 minutes.
- The BCM detects a decrease in battery capacity below a prescribed limit.

Systems powered by the retained accessory power relay 1 and retained accessory power relay 2 during the retained accessory power mode are as follows:

Note: The vehicle may not be equipped with all components as listed below.

- Accessory Power Receptacle
- Cigarette Lighter Receptacle
- Sunroof Control Module
- Sunroof Switch
- Sliding Rear Window Switch
- Mobile Device Wireless Charger Module

Serial Data Controlled Retained Accessory Power

Retained accessory power systems controlled by serial data are as follows:

Radio

Radio retained accessory power activation / termination is the same as relay operation with one exception; the only door switch that will turn off the radio during retained accessory power is the driver door open switch.

Vehicle Communication Interface Module (VCIM) (Onstar®) (If Equipped)

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode, and keep the radio in RAP mode until the call is terminated.

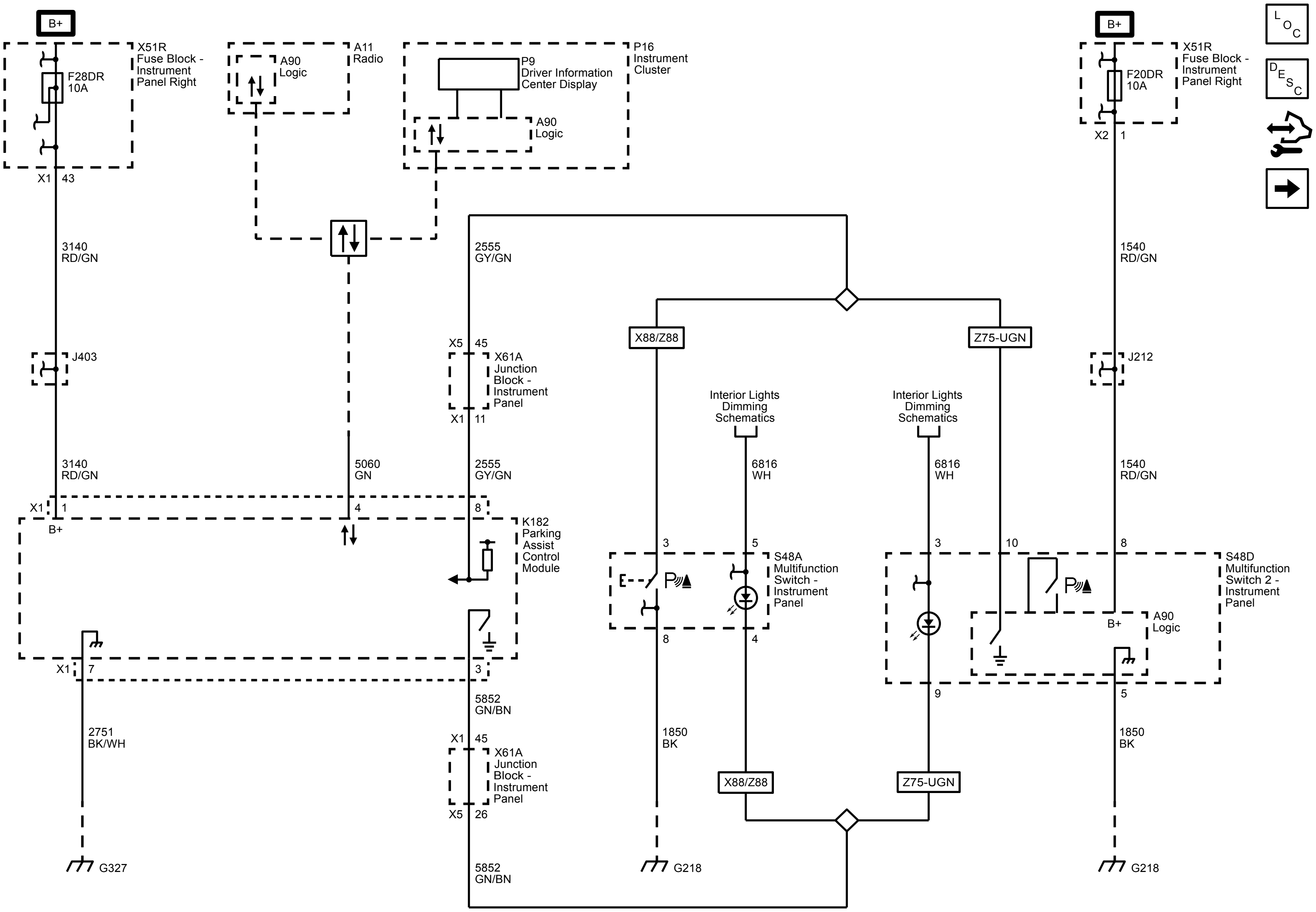
Safety and Security

Object Detection and Pedestrian Protection

Schematic and Routing Diagrams

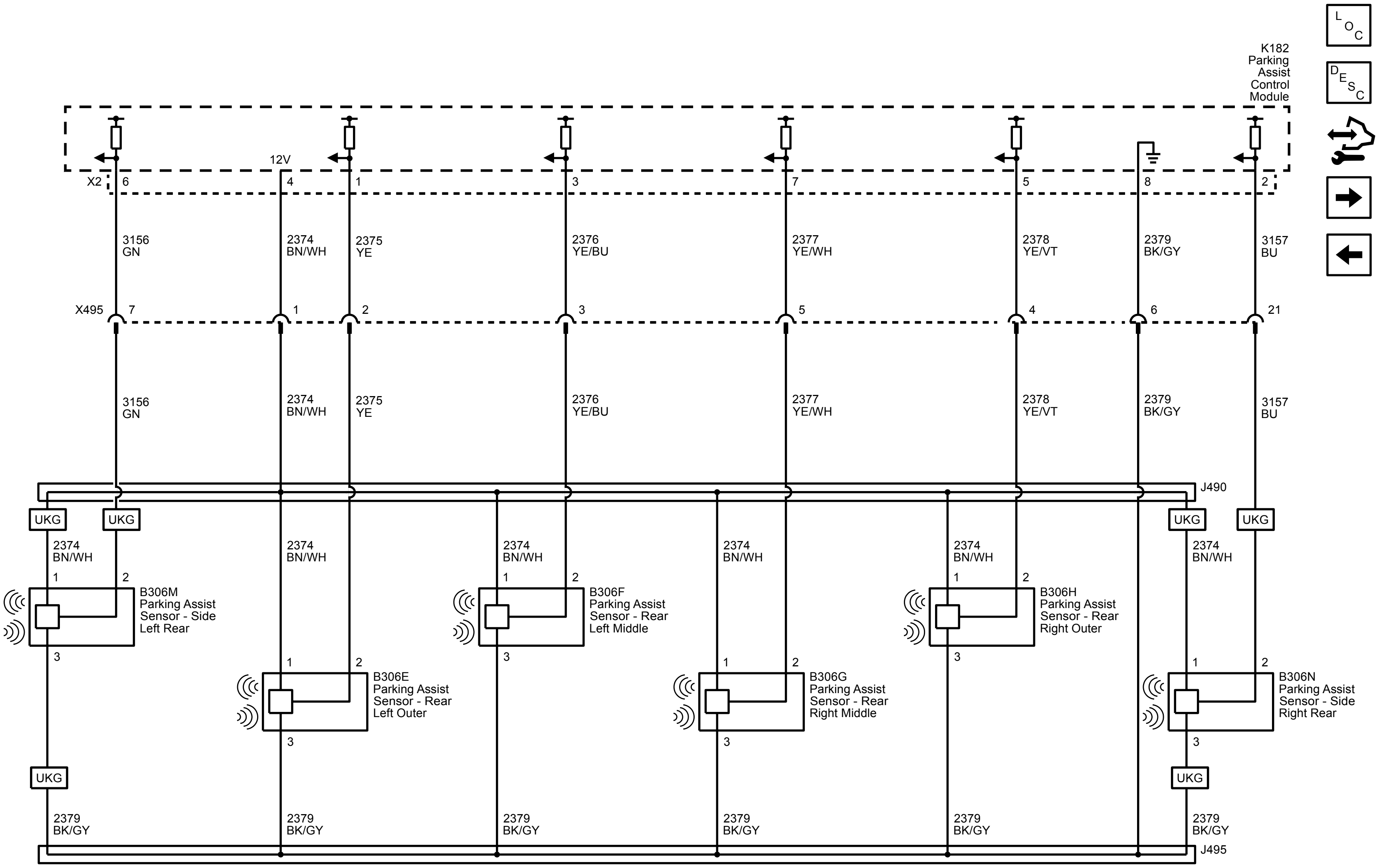
Object Detection Schematics

Park Assist - Power, Ground, and Serial Data (UD5/UD7/UKG)



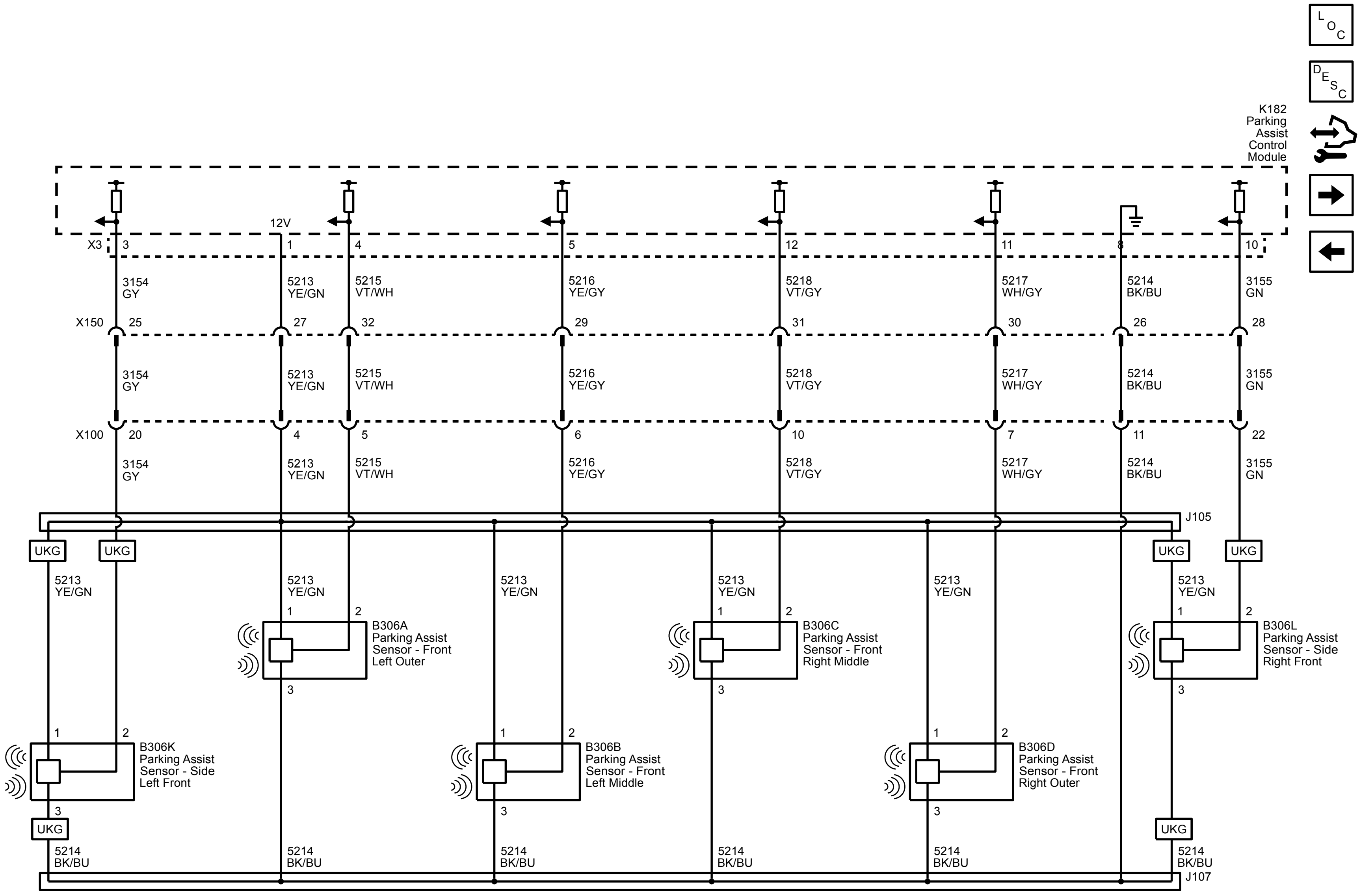
B+
X51R
Fuse Block -
Instrument
Panel Right
F28DR
10A
X1
43
3140
RD/GN
J403
3140
RD/GN
A90
Logic
A11
Radio
P9
Driver Information
Center Display
A90
Logic
P16
Instrument
Cluster
5060
GN
2555
GY/GN
X5
45
X61A
Junction
Block -
Instrument
Panel
X1
11
2555
GY/GN
X1
1
B+
4
8
K182
Parking
Assist
Control
Module
X1
7
3
2751
BK/WH
G327
5852
GN/BN
X1
45
X61A
Junction
Block -
Instrument
Panel
X5
26
5852
GN/BN
X88/Z88
Z75-UGN
Interior Lights
Dimming
Schematics
6816
WH
Interior Lights
Dimming
Schematics
6816
WH
3
5
S48A
Multifunction
Switch -
Instrument
Panel
8
4
1850
BK
G218
X88/Z88
Z75-UGN
3
10
8
S48D
Multifunction
Switch 2 -
Instrument
Panel
A90
Logic
B+
9
5
1850
BK
G218
B+
X51R
Fuse Block -
Instrument
Panel Right
F20DR
10A
X2
1
1540
RD/GN
J212
1540
RD/GN
LOC
DESC

Park Assist - Rear Sensors (UD5/UD7/UKG)

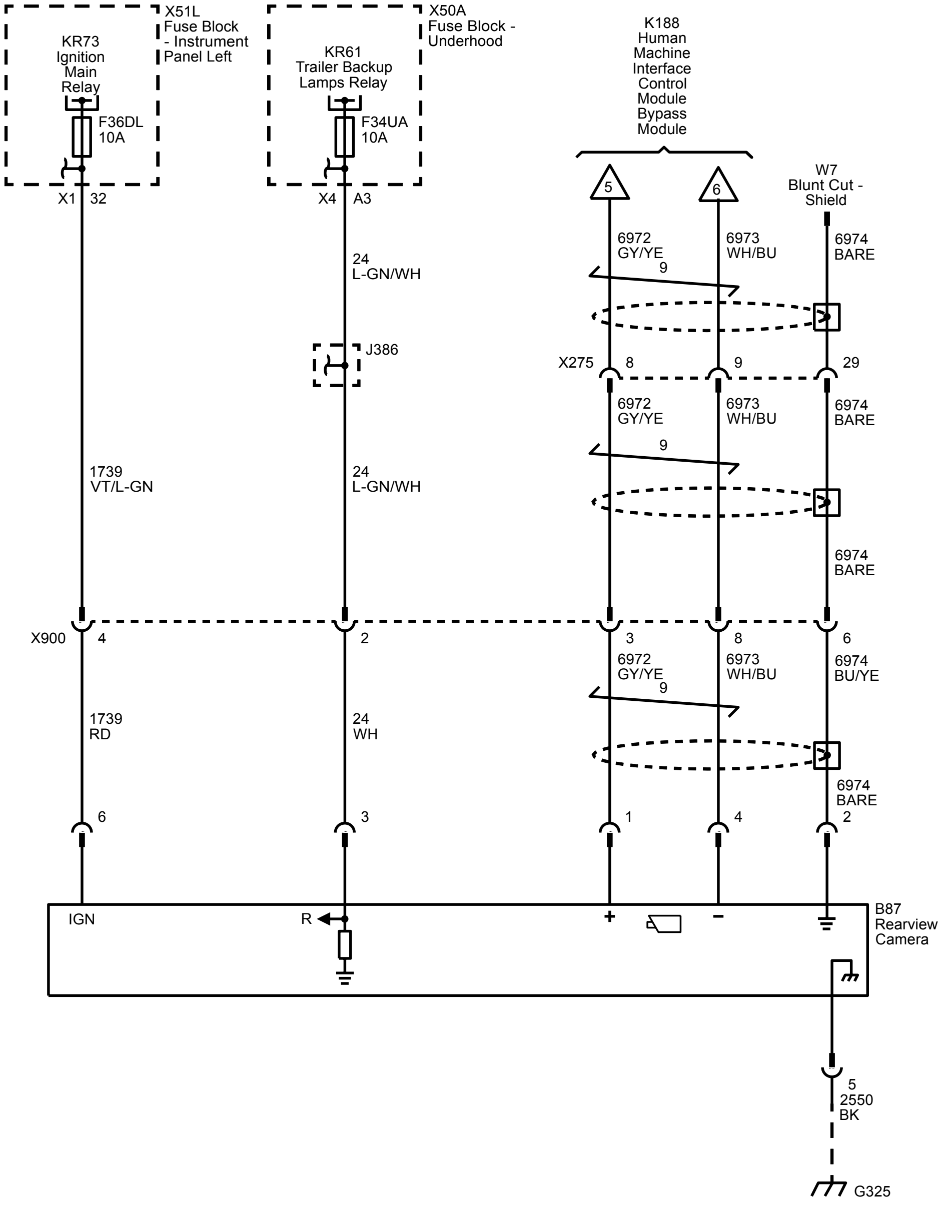


L O C
D E S C
K182
Parking
Assist
Control
Module
12V
X2
6
4
1
3
7
5
8
2
3156
GN
2374
BN/WH
2375
YE
2376
YE/BU
2377
YE/WH
2378
YE/VT
2379
BK/GY
3157
BU
X495
7
1
2
3
5
4
6
21
3156
GN
2374
BN/WH
2375
YE
2376
YE/BU
2377
YE/WH
2378
YE/VT
2379
BK/GY
3157
BU
J490
UKG
UKG
UKG
UKG
2374
BN/WH
2374
BN/WH
2374
BN/WH
2374
BN/WH
2374
BN/WH
2374
BN/WH
1
2
B306M
Parking Assist
Sensor - Side
Left Rear
3
1
2
B306E
Parking Assist
Sensor - Rear
Left Outer
3
1
2
B306F
Parking Assist
Sensor - Rear
Left Middle
3
1
2
B306G
Parking Assist
Sensor - Rear
Right Middle
3
1
2
B306H
Parking Assist
Sensor - Rear
Right Outer
3
1
2
B306N
Parking Assist
Sensor - Side
Right Rear
3
UKG
UKG
2379
BK/GY
2379
BK/GY
2379
BK/GY
2379
BK/GY
2379
BK/GY
2379
BK/GY
J495

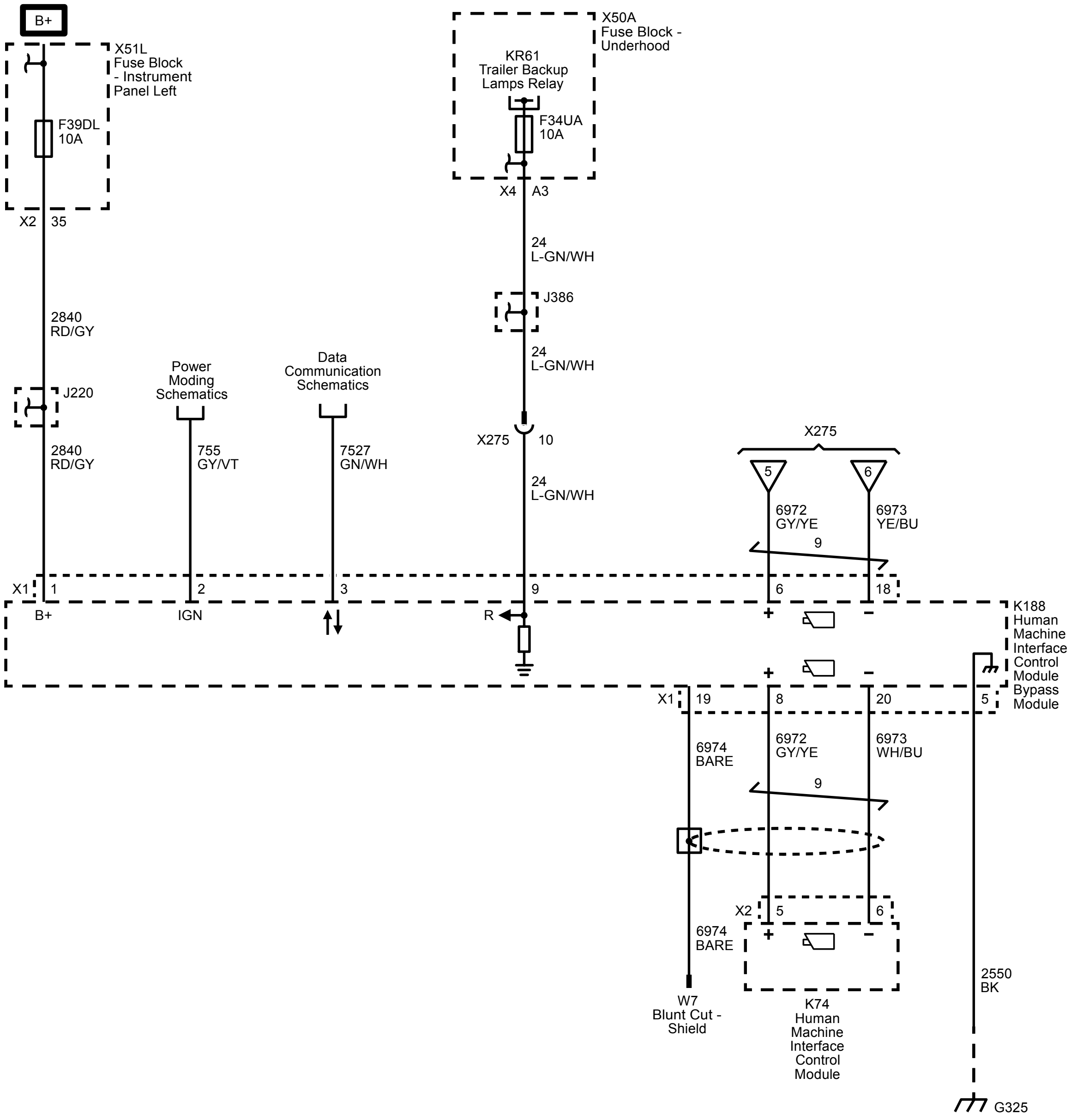
Park Assist - Front Sensors (UD5/UKG)


LOC
DESC
K182
Parking
Assist
Control
Module
X3
3
12V
1
4
5
12
11
8
10
3154
GY
5213
YE/GN
5215
VT/WH
5216
YE/GY
5218
VT/GY
5217
WH/GY
5214
BK/BU
3155
GN
X150
25
27
32
29
31
30
26
28
X100
20
4
5
6
10
7
11
22
J105
UKG
B306A
Parking Assist
Sensor - Front
Left Outer
B306C
Parking Assist
Sensor - Front
Right Middle
B306L
Parking Assist
Sensor - Side
Right Front
B306K
Parking Assist
Sensor - Side
Left Front
B306B
Parking Assist
Sensor - Front
Left Middle
B306D
Parking Assist
Sensor - Front
Right Outer
1
2
3
J107

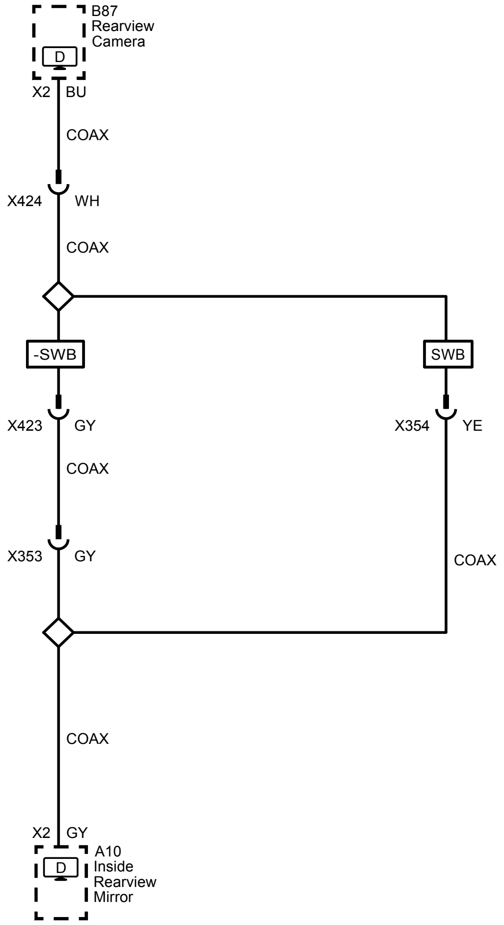
Rearview Camera (UVC) (1 of 2)


X51L
Fuse Block - Instrument Panel Left
KR73
Ignition Main Relay
F36DL
10A
X1
32
X50A
Fuse Block - Underhood
KR61
Trailer Backup Lamps Relay
F34UA
10A
X4
A3
K188
Human Machine Interface Control Module Bypass Module
5
6
W7
Blunt Cut - Shield
24
L-GN/WH
J386
6972
GY/YE
9
6973
WH/BU
6974
BARE
X275
8
9
29
6972
GY/YE
9
6973
WH/BU
6974
BARE
1739
VT/L-GN
24
L-GN/WH
6974
BARE
X900
4
2
3
8
6
6972
GY/YE
9
6973
WH/BU
6974
BU/YE
1739
RD
24
WH
6974
BARE
2
6
3
1
4
IGN
R
+
−
B87
Rearview Camera
5
2550
BK
G325

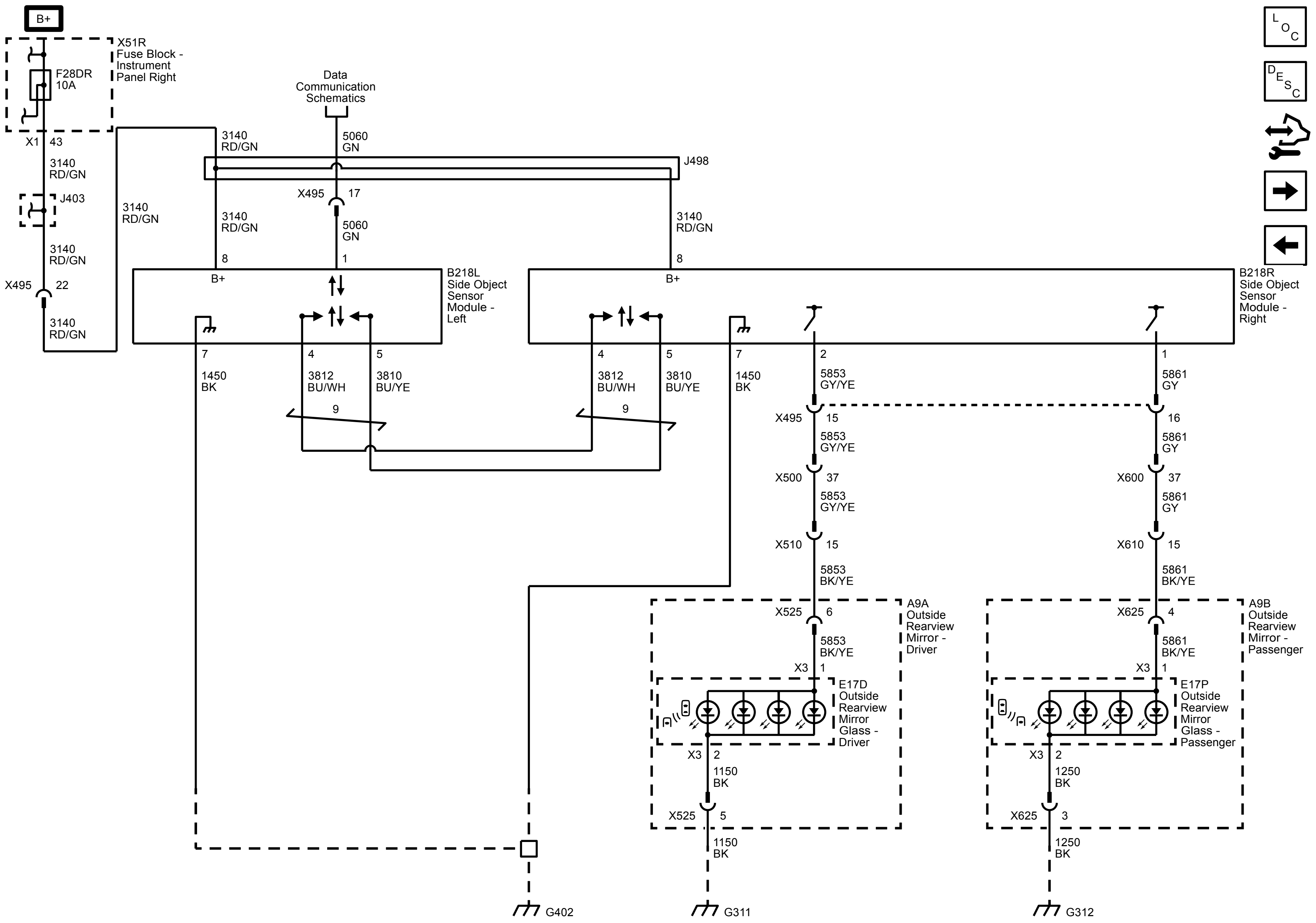
Rearview Camera (UVC) (2 of 2)


B+
X51L
Fuse Block
- Instrument
Panel Left
F39DL
10A
X2
35
2840
RD/GY
J220
2840
RD/GY
Power
Moding
Schematics
755
GY/VT
Data
Communication
Schematics
7527
GN/WH
X50A
Fuse Block -
Underhood
KR61
Trailer Backup
Lamps Relay
F34UA
10A
X4
A3
24
L-GN/WH
J386
24
L-GN/WH
X275
10
24
L-GN/WH
X275
5
6
6972
GY/YE
6973
YE/BU
9
X1
1
2
3
9
6
18
B+
IGN
R
+
−
K188
Human
Machine
Interface
Control
Module
Bypass
Module
+
−
X1
19
8
20
5
6974
BARE
6972
GY/YE
6973
WH/BU
9
X2
5
6
+
−
6974
BARE
W7
Blunt Cut -
Shield
K74
Human
Machine
Interface
Control
Module
2550
BK
G325

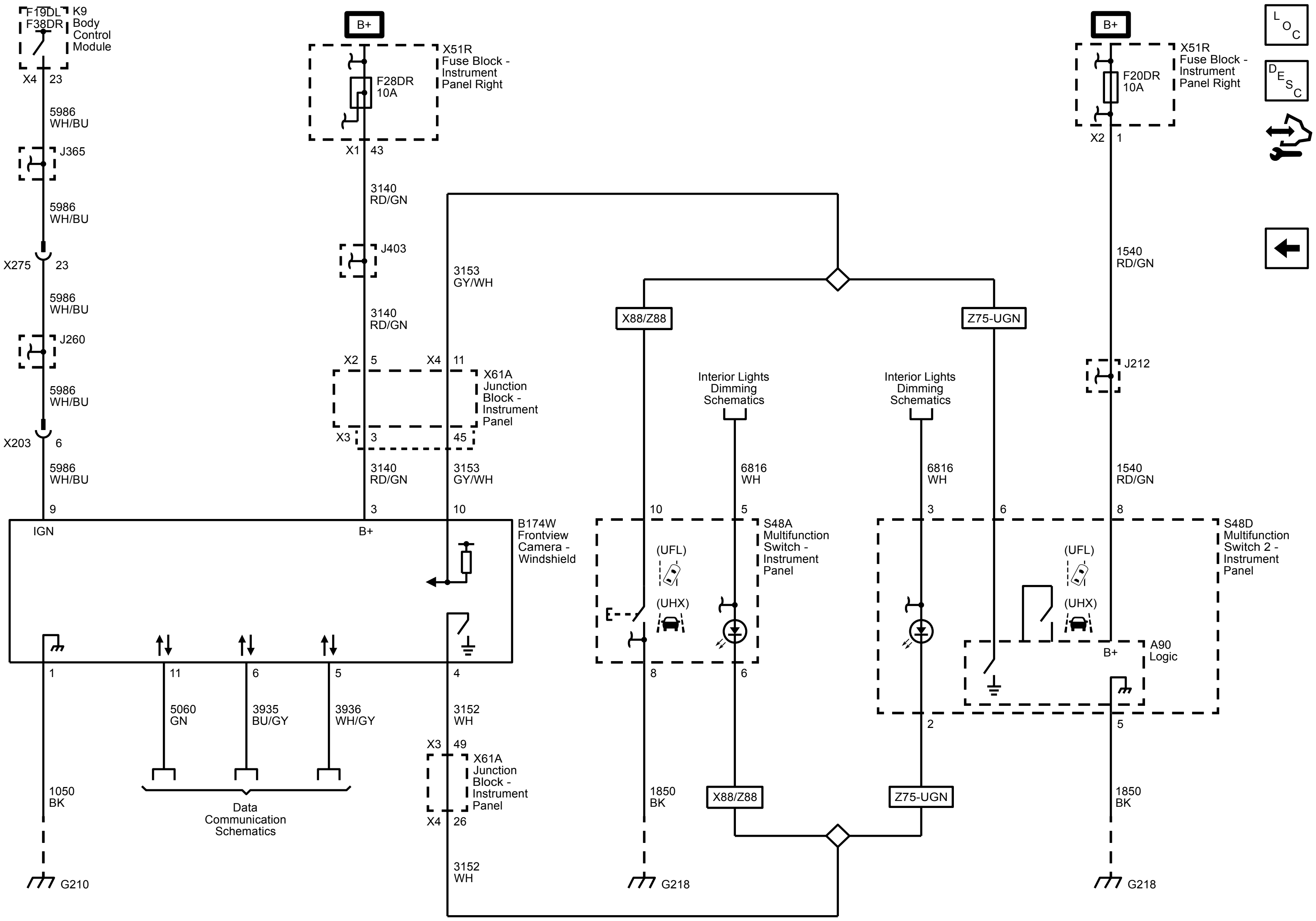
Rearview Camera (DRZ)


B87
Rearview
Camera
D
X2
BU
COAX
X424
WH
COAX
-SWB
SWB
X423
GY
X354
YE
COAX
X353
GY
COAX
COAX
X2
GY
D
A10
Inside
Rearview
Mirror

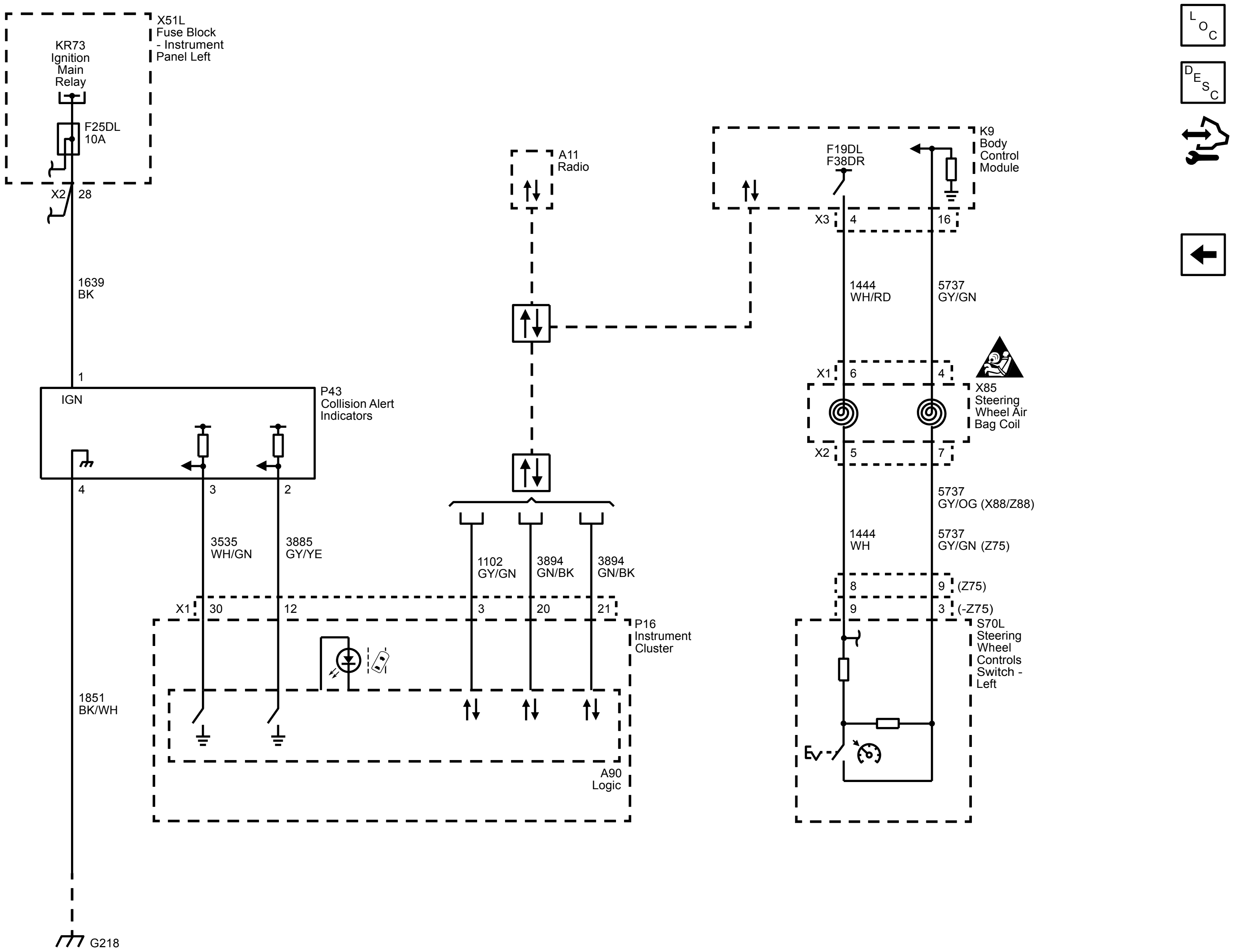
Side Blind Zone Alert (UKC)


B+
X51R
Fuse Block -
Instrument
Panel Right
F28DR
10A
X1 43
3140
RD/GN
J403
3140
RD/GN
X495 22
3140
RD/GN
3140
RD/GN
Data
Communication
Schematics
3140
RD/GN
5060
GN
J498
X495 17
3140
RD/GN
5060
GN
3140
RD/GN
8
1
8
B+
B+
B218L
Side Object
Sensor
Module -
Left
B218R
Side Object
Sensor
Module -
Right
7
4
5
7
4
5
2
1
1450
BK
3812
BU/WH
3810
BU/YE
3812
BU/WH
3810
BU/YE
1450
BK
9
9
5853
GY/YE
5861
GY
X495 15
16
5853
GY/YE
5861
GY
X500 37
X600 37
5853
GY/YE
5861
GY
X510 15
X610 15
5853
BK/YE
5861
BK/YE
X525 6
A9A
Outside
Rearview
Mirror -
Driver
X625 4
A9B
Outside
Rearview
Mirror -
Passenger
5853
BK/YE
5861
BK/YE
X3 1
X3 1
E17D
Outside
Rearview
Mirror
Glass -
Driver
E17P
Outside
Rearview
Mirror
Glass -
Passenger
X3 2
X3 2
1150
BK
1250
BK
X525 5
X625 3
1150
BK
1250
BK
G402
G311
G312
LOC
DESC

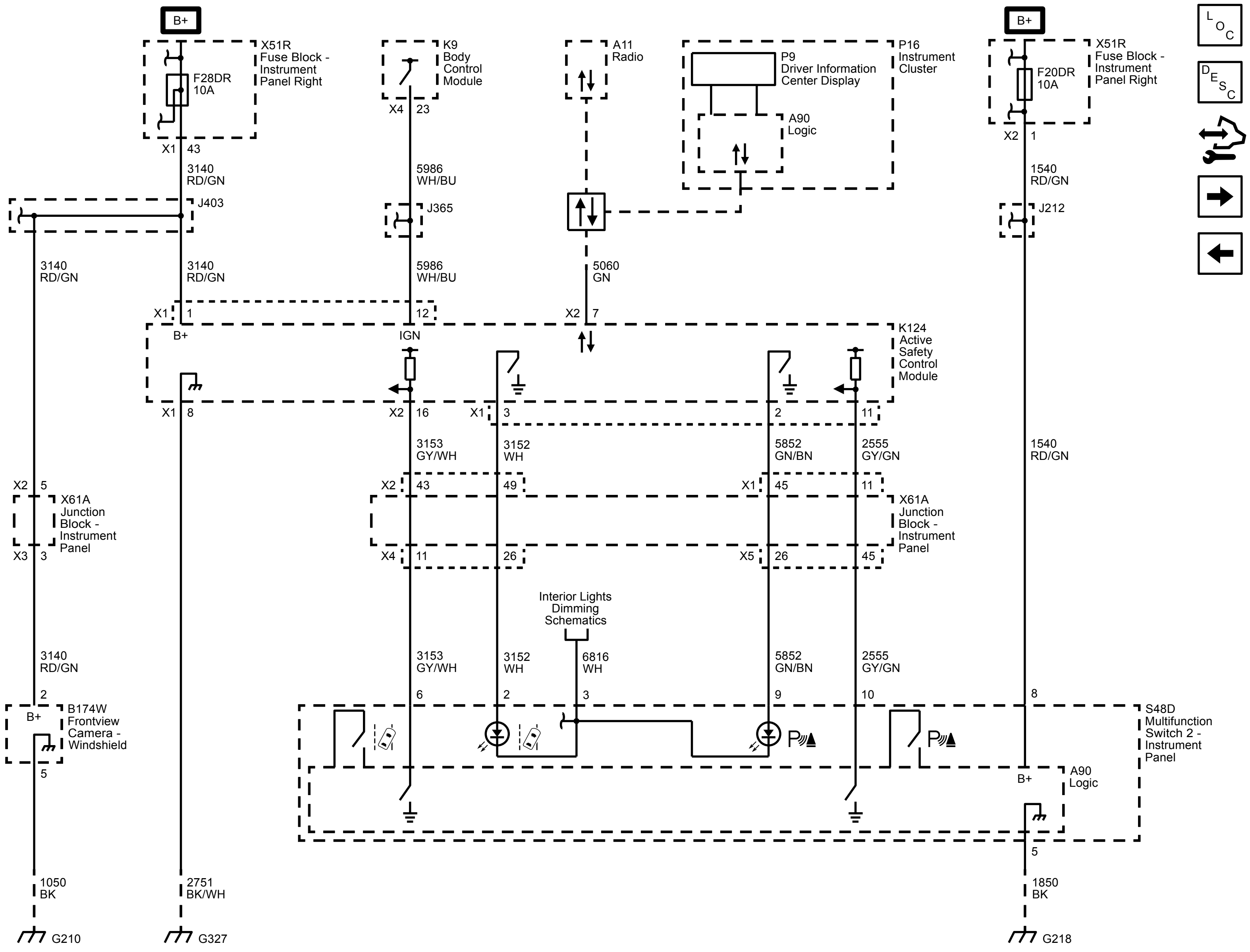
Lane Departure Warning and Keep Assist (UEU, UFL or UHX) (1 of 2)



F19DL
F38DR
K9 Body Control Module
X4 23
5986 WH/BU
J365
5986 WH/BU
X275 23
5986 WH/BU
J260
5986 WH/BU
X203 6
5986 WH/BU
9
IGN
B+
X51R Fuse Block - Instrument Panel Right
F28DR 10A
X1 43
3140 RD/GN
J403
3140 RD/GN
X2 5
X4 11
X61A Junction Block - Instrument Panel
X3 3
45
3140 RD/GN
3153 GY/WH
3153 GY/WH
3
B+
10
B174W Frontview Camera - Windshield
1
11
6
5
4
1050 BK
G210
5060 GN
3935 BU/GY
3936 WH/GY
Data Communication Schematics
3152 WH
X3 49
X61A Junction Block - Instrument Panel
X4 26
3152 WH
X88/Z88
Z75-UGN
Interior Lights Dimming Schematics
Interior Lights Dimming Schematics
6816 WH
6816 WH
10
5
S48A Multifunction Switch - Instrument Panel
(UFL)
(UHX)
8
6
1850 BK
G218
X88/Z88
Z75-UGN
3
6
8
S48D Multifunction Switch 2 - Instrument Panel
(UFL)
(UHX)
A90 Logic
B+
2
5
1850 BK
G218
B+
X51R Fuse Block - Instrument Panel Right
F20DR 10A
X2 1
1540 RD/GN
J212
1540 RD/GN
LOC
DESC

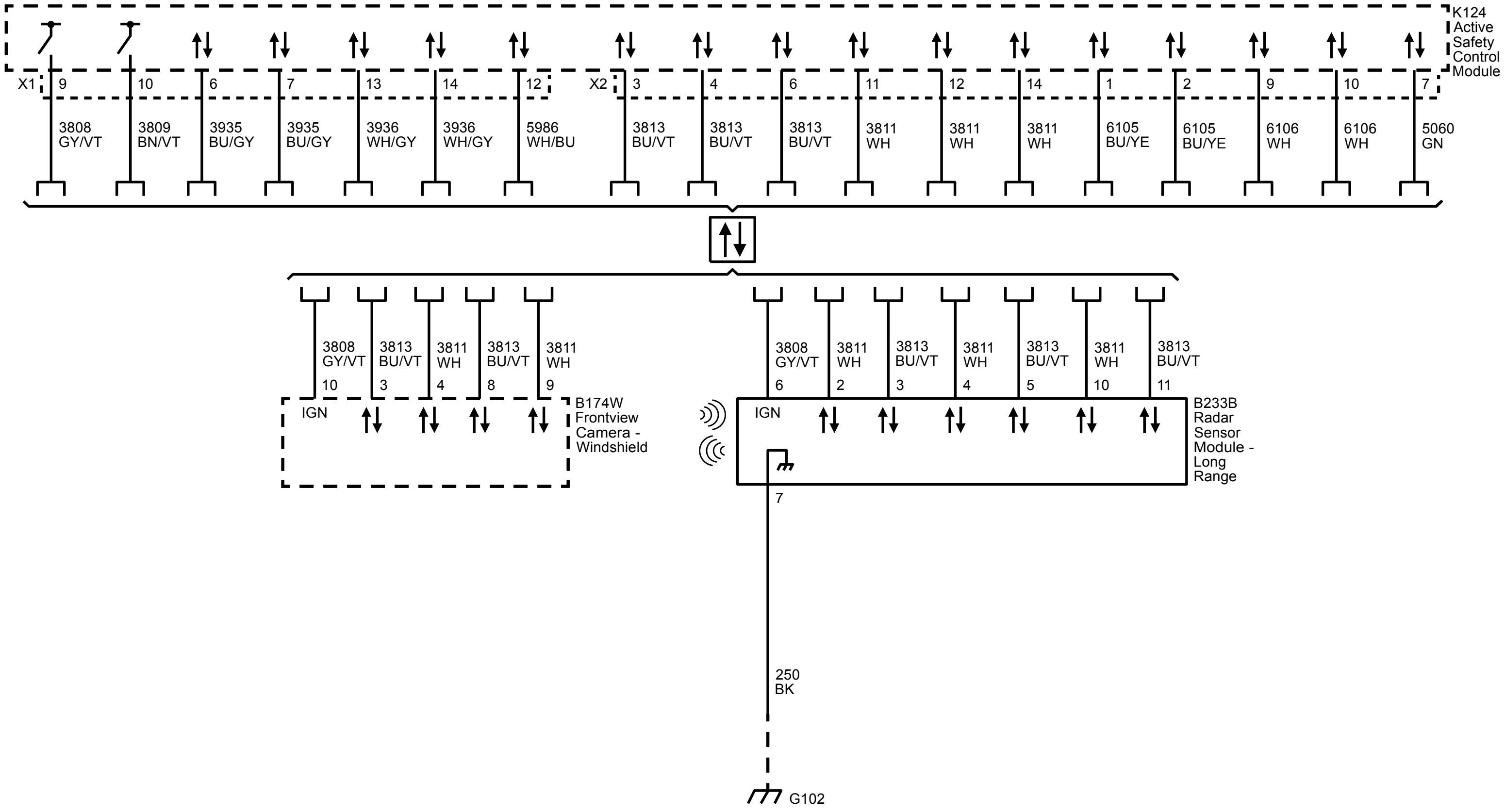

X51L
Fuse Block
- Instrument
Panel Left
KR73
Ignition
Main
Relay
F25DL
10A
X2
28
1639
BK
1
IGN
P43
Collision Alert
Indicators
4
3
2
3535
WH/GN
3885
GY/YE
1851
BK/WH
G218
A11
Radio
1102
GY/GN
3894
GN/BK
3894
GN/BK
X1
30
12
3
20
21
P16
Instrument
Cluster
A90
Logic
K9
Body
Control
Module
F19DL
F38DR
X3
4
16
1444
WH/RD
5737
GY/GN
X1
6
4
X85
Steering
Wheel Air
Bag Coil
X2
5
7
5737
GY/OG (X88/Z88)
1444
WH
5737
GY/GN (Z75)
8
9
(Z75)
9
3
(-Z75)
S70L
Steering
Wheel
Controls
Switch -
Left
LOC
DESC

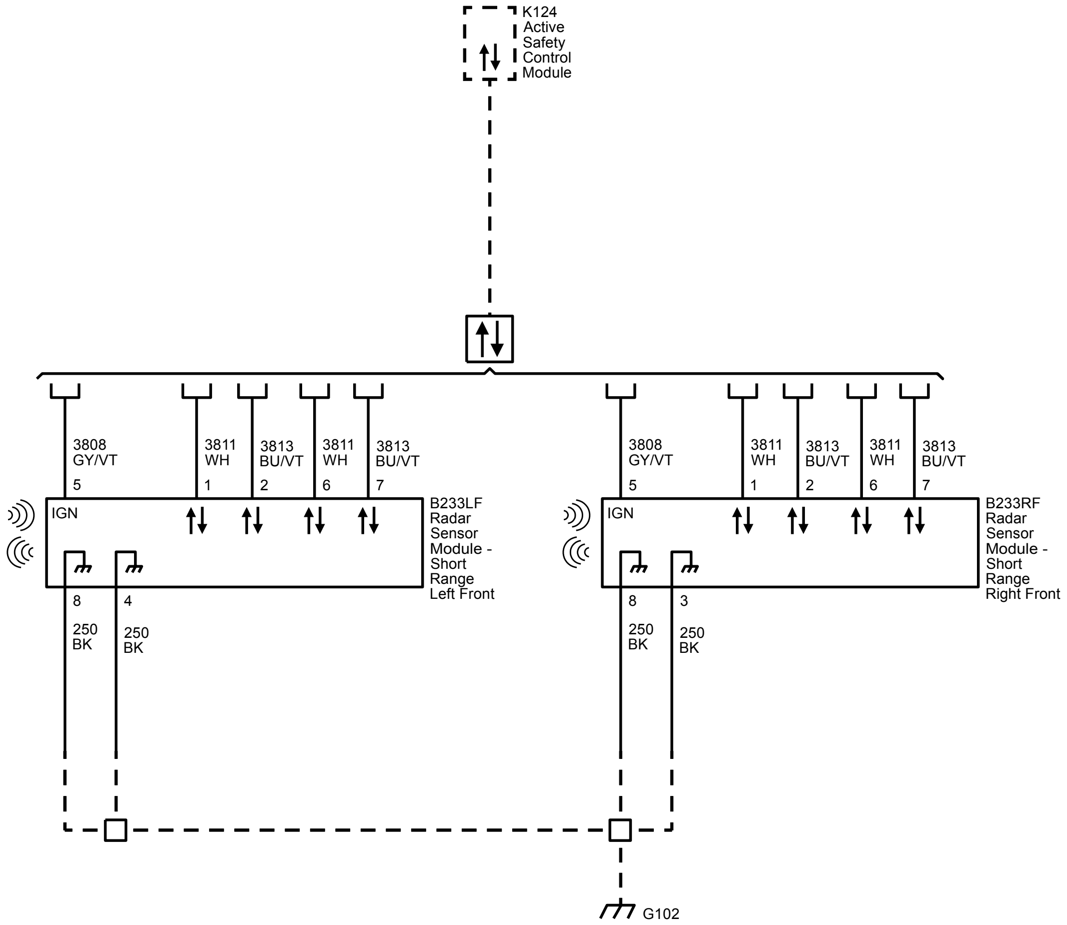
Comprehensive Safety - Power, Ground, Serial Data, and Multifunction Switch (UGN+Z75)

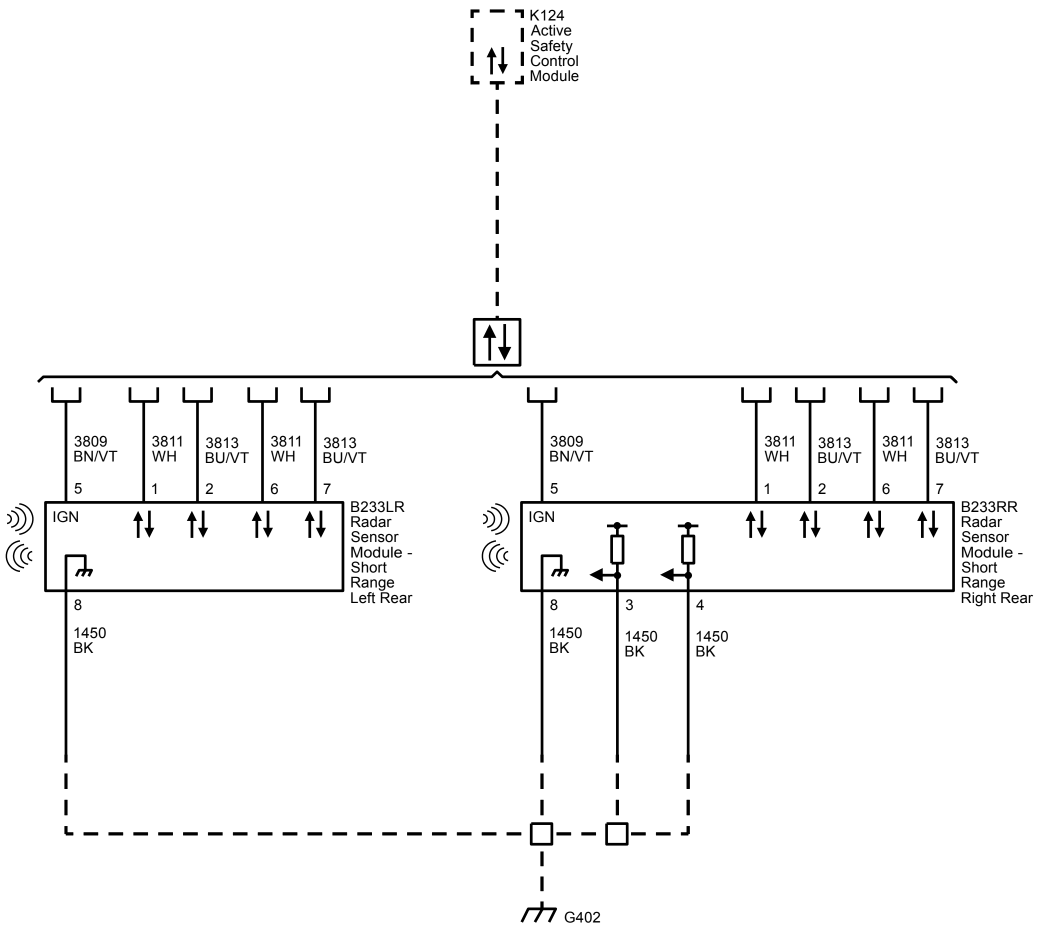

B+
X51R
Fuse Block -
Instrument
Panel Right
F28DR
10A
X1 43
3140
RD/GN
J403
K9
Body
Control
Module
X4 23
5986
WH/BU
J365
A11
Radio
5060
GN
P16
Instrument
Cluster
P9
Driver Information
Center Display
A90
Logic
B+
X51R
Fuse Block -
Instrument
Panel Right
F20DR
10A
X2 1
1540
RD/GN
J212
3140
RD/GN
X1 1
B+
12
IGN
X2 7
K124
Active
Safety
Control
Module
X1 8
X2 16
X1 3
2
11
3153
GY/WH
3152
WH
5852
GN/BN
2555
GY/GN
1540
RD/GN
X2 5
X61A
Junction
Block -
Instrument
Panel
X3 3
X2 43
49
X1 45
11
X4 11
26
X5 26
45
X61A
Junction
Block -
Instrument
Panel
Interior Lights
Dimming
Schematics
3140
RD/GN
3153
GY/WH
3152
WH
6816
WH
5852
GN/BN
2555
GY/GN
2
B+
B174W
Frontview
Camera -
Windshield
5
6
2
3
9
10
8
S48D
Multifunction
Switch 2 -
Instrument
Panel
B+
A90
Logic
5
1050
BK
2751
BK/WH
1850
BK
G210
G327
G218
LOC
DESC

Comprehensive Safety - Camera and Front Long Range Radar (UGN+Z75)

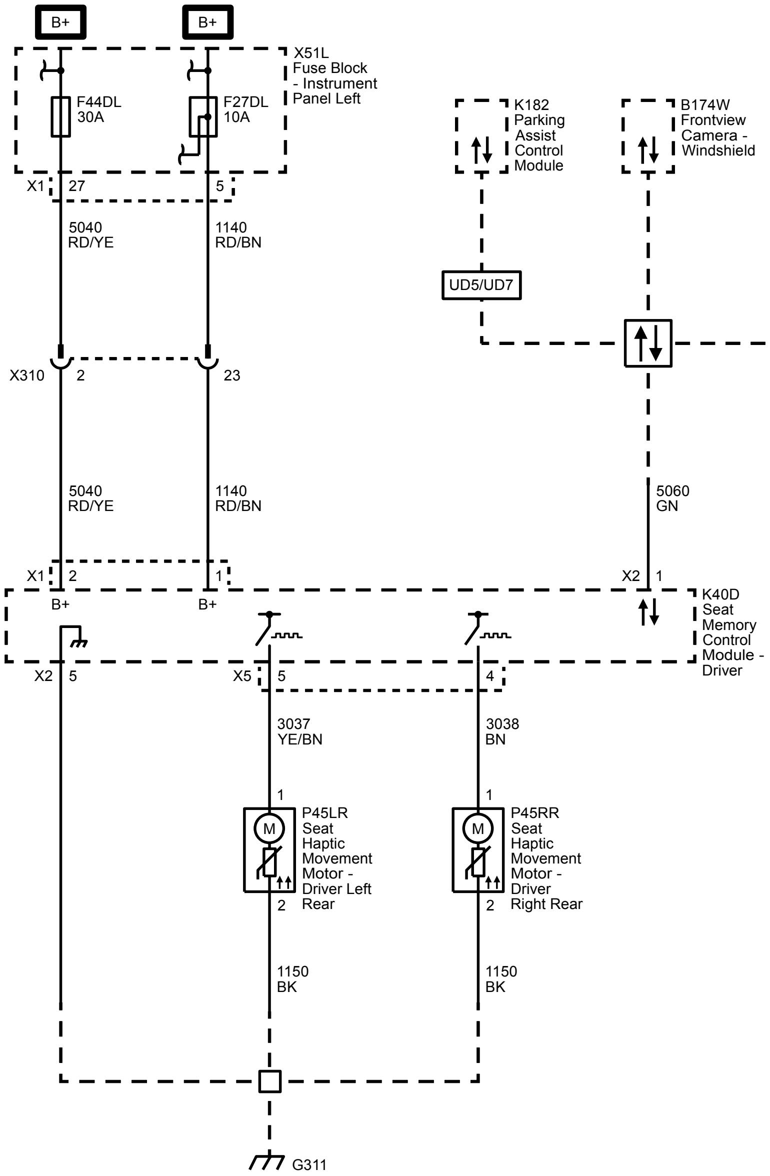
LOC
DESC


K124
Active
Safety
Control
Module
X1
9
3808
GY/VT
10
3809
BN/VT
6
3935
BU/GY
7
3935
BU/GY
13
3936
WH/GY
14
3936
WH/GY
12
5986
WH/BU
X2
3
3813
BU/VT
4
3813
BU/VT
6
3813
BU/VT
11
3811
WH
12
3811
WH
14
3811
WH
1
6105
BU/YE
2
6105
BU/YE
9
6106
WH
10
6106
WH
7
5060
GN
3808
GY/VT
10
3813
BU/VT
3
3811
WH
4
3813
BU/VT
8
3811
WH
9
IGN
B174W
Frontview
Camera -
Windshield
3808
GY/VT
6
3811
WH
2
3813
BU/VT
3
3811
WH
4
3813
BU/VT
5
3811
WH
10
3813
BU/VT
11
IGN
B233B
Radar
Sensor
Module -
Long
Range
7
250
BK
G102


K124
Active
Safety
Control
Module
3808
GY/VT
5
3811
WH
1
3813
BU/VT
2
3811
WH
6
3813
BU/VT
7
IGN
B233LF
Radar
Sensor
Module -
Short
Range
Left Front
8
250
BK
4
250
BK
3808
GY/VT
5
3811
WH
1
3813
BU/VT
2
3811
WH
6
3813
BU/VT
7
IGN
B233RF
Radar
Sensor
Module -
Short
Range
Right Front
8
250
BK
3
250
BK
G102

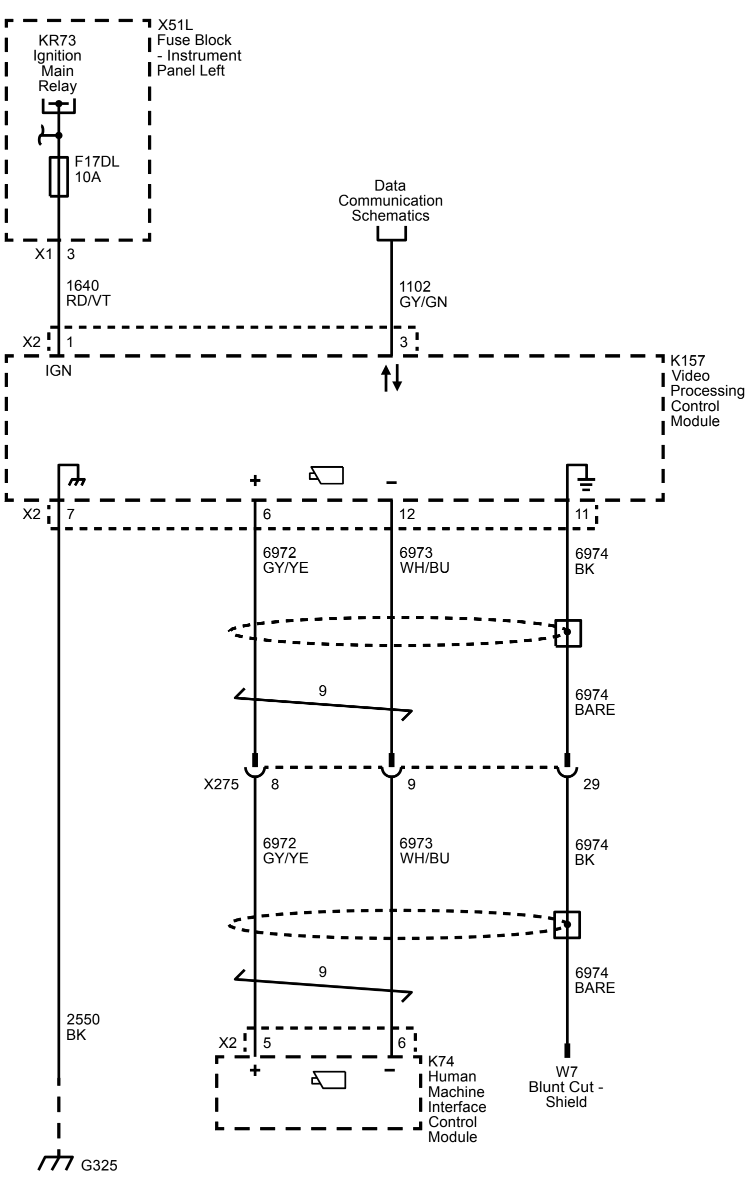

K124
Active
Safety
Control
Module
3809
BN/VT
3811
WH
3813
BU/VT
3811
WH
3813
BU/VT
5
1
2
6
7
IGN
B233LR
Radar
Sensor
Module -
Short
Range
Left Rear
8
1450
BK
3809
BN/VT
3811
WH
3813
BU/VT
3811
WH
3813
BU/VT
5
1
2
6
7
IGN
B233RR
Radar
Sensor
Module -
Short
Range
Right Rear
8
3
4
1450
BK
1450
BK
1450
BK
G402

Seat Haptic Motors (UFL, UHX or UGN)

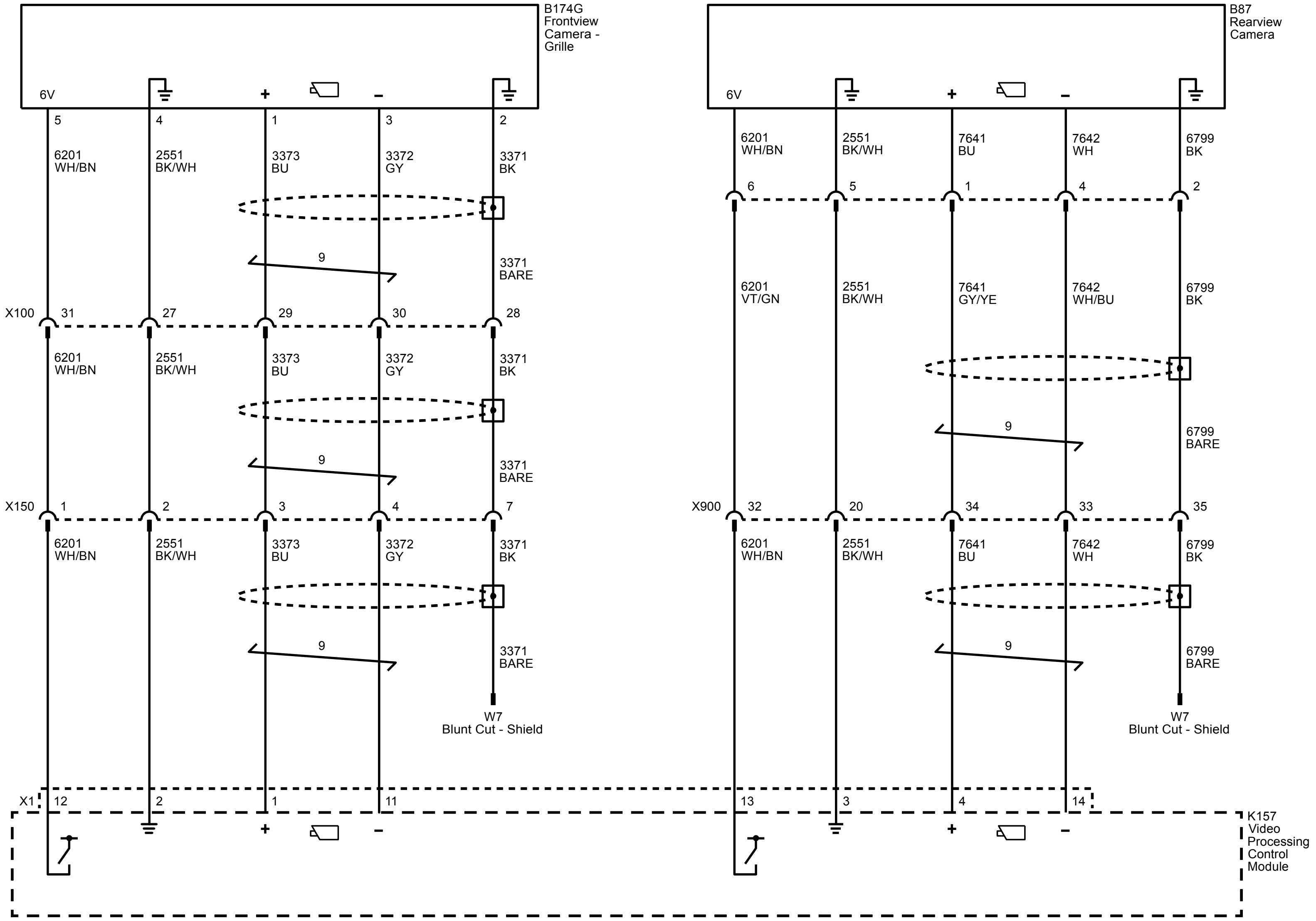


B+
B+
X51L
Fuse Block
- Instrument
Panel Left
F44DL
30A
F27DL
10A
X1
27
5
5040
RD/YE
1140
RD/BN
K182
Parking
Assist
Control
Module
B174W
Frontview
Camera -
Windshield
K124
Active
Safety
Control
Module
UD5/UD7
UGN
X310
2
23
5040
RD/YE
1140
RD/BN
5060
GN
X1
2
1
X2
1
B+
B+
K40D
Seat
Memory
Control
Module -
Driver
X2
5
X5
5
4
3037
YE/BN
3038
BN
1
1
M
M
P45LR
Seat
Haptic
Movement
Motor -
Driver Left
Rear
P45RR
Seat
Haptic
Movement
Motor -
Driver
Right Rear
2
2
1150
BK
1150
BK
G311

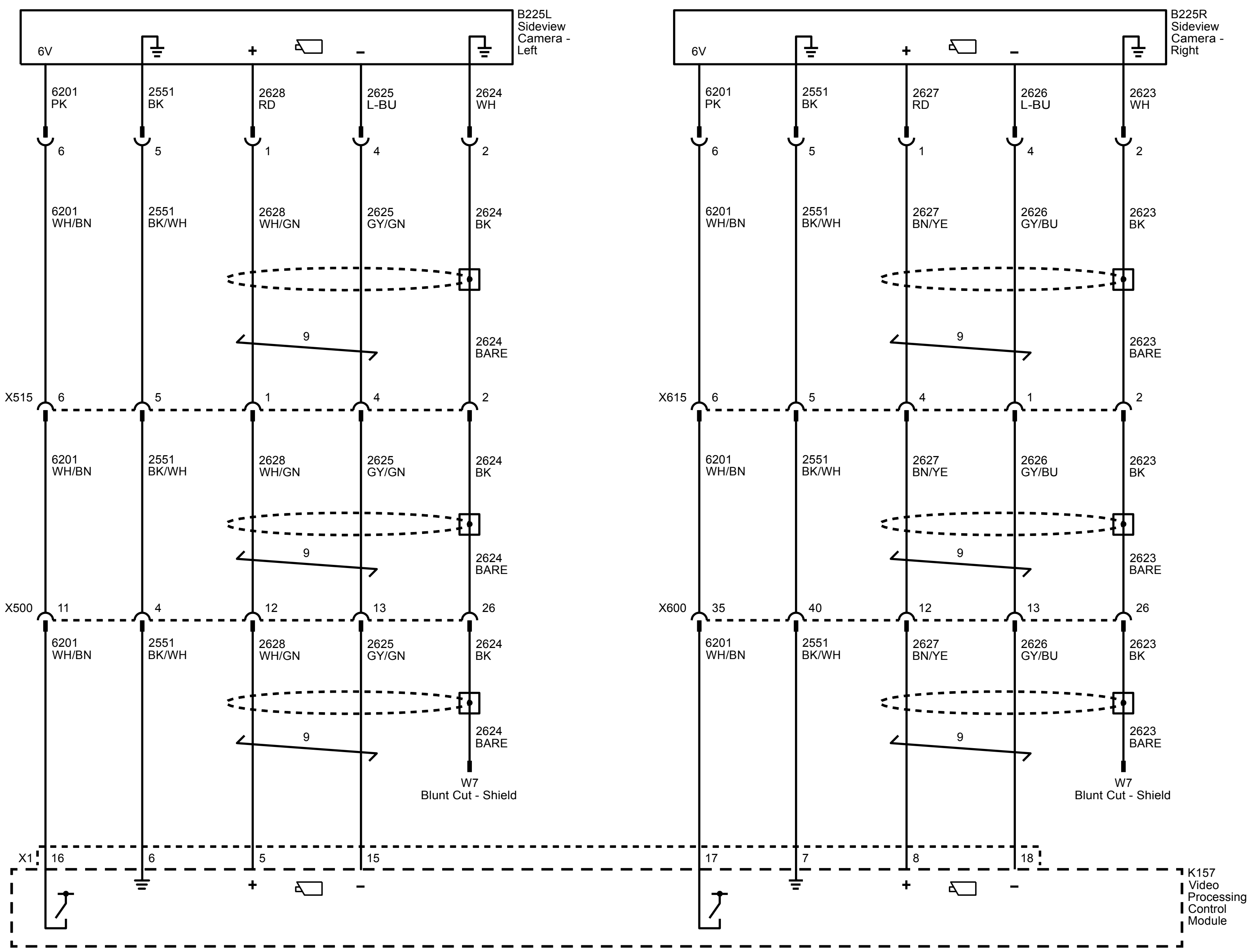
360 Degree Vision - Power, Ground, and Serial Data (UVH)


X51L
Fuse Block - Instrument Panel Left
KR73 Ignition Main Relay
F17DL 10A
X1 3
1640 RD/VT
Data Communication Schematics
1102 GY/GN
X2 1
3
IGN
K157 Video Processing Control Module
+
–
X2 7
6
12
11
6972 GY/YE
6973 WH/BU
6974 BK
9
6974 BARE
X275 8
9
29
6972 GY/YE
6973 WH/BU
6974 BK
9
6974 BARE
2550 BK
X2 5
6
+
–
K74 Human Machine Interface Control Module
W7 Blunt Cut - Shield
G325

360 Degree Vision - Front and Rear Cameras (UVH)


B174G
Frontview
Camera -
Grille
6V
5
4
1
3
2
6201
WH/BN
2551
BK/WH
3373
BU
3372
GY
3371
BK
9
3371
BARE
X100
31
27
29
30
28
X150
1
2
3
4
7
W7
Blunt Cut - Shield
B87
Rearview
Camera
6V
6201
WH/BN
2551
BK/WH
7641
BU
7642
WH
6799
BK
6
5
1
4
2
6201
VT/GN
2551
BK/WH
7641
GY/YE
7642
WH/BU
6799
BK
9
6799
BARE
X900
32
20
34
33
35
W7
Blunt Cut - Shield
X1
12
2
1
11
13
3
4
14
K157
Video
Processing
Control
Module

360 Degree Vision - Side Vision Cameras (UVH)


B225L Sideview Camera - Left
6V
+
–
6201 PK
2551 BK
2628 RD
2625 L-BU
2624 WH
6
5
1
4
2
6201 WH/BN
2551 BK/WH
2628 WH/GN
2625 GY/GN
2624 BK
9
2624 BARE
X515
6
5
1
4
2
6201 WH/BN
2551 BK/WH
2628 WH/GN
2625 GY/GN
2624 BK
9
2624 BARE
X500
11
4
12
13
26
6201 WH/BN
2551 BK/WH
2628 WH/GN
2625 GY/GN
2624 BK
9
2624 BARE
W7 Blunt Cut - Shield
B225R Sideview Camera - Right
6V
+
–
6201 PK
2551 BK
2627 RD
2626 L-BU
2623 WH
6
5
1
4
2
6201 WH/BN
2551 BK/WH
2627 BN/YE
2626 GY/BU
2623 BK
9
2623 BARE
X615
6
5
4
1
2
6201 WH/BN
2551 BK/WH
2627 BN/YE
2626 GY/BU
2623 BK
9
2623 BARE
X600
35
40
12
13
26
6201 WH/BN
2551 BK/WH
2627 BN/YE
2626 GY/BU
2623 BK
9
2623 BARE
W7 Blunt Cut - Shield
X1
16
6
5
15
17
7
8
18
+
–
+
–
K157 Video Processing Control Module

Description and Operation

Adaptive Cruise Control Description and Operation (with KSG)

The adaptive cruise control system is an enhanced cruise control system with the ability to sense and react to forward traffic. Compared to the common cruise control system found on many vehicles, the main functional enhancement of the adaptive cruise control system is the ability to detect the presence of a vehicle in the path of the adaptive cruise control vehicle. Adaptive cruise control retains the existing cruise control feature that controls the vehicle speed to the driver selected speed. However, adaptive cruise control allows a driver to set and maintain a following distance to the preceding nearest vehicle in the path ahead. The active safety control module controller calculates a follow speed limit to ensure an acceptable distance is maintained to the preceding vehicle in front, should one be present. The adaptive cruise control system automatically adjusts the speed when the vehicle comes up behind a slower travelling vehicle in front. The system applies limited automatic braking and throttle control without driver input when necessary to maintain the set following distance. The preceding vehicle's speed and acceleration along with the active cruise control vehicle speed and acceleration and the distance between the two vehicles are factors used by the active safety control module controller to determine the follow speed limit. The vehicle speeds up to the original driver selected set speed when the pathway becomes clear without driver input.

The adaptive cruise control functionality depends on various modules on the vehicle to function and each module performs a function that is critical to the proper operation of the adaptive cruise control system. Adaptive cruise control will not operate if any components fail. Communication between modules is via serial data. The following is a functional description of the active safety control module and the other associated components:

- Active safety control module
- Body control module
- Engine control module
- Electronic brake control module
- Transmission control module
- Instrument cluster
- Cruise control switch
- Gap switch

Active Safety Control Module

The active safety control module analyzes data from various modules, sensors, and switches to provide enhanced safety features. In addition to enhanced safety features, the active safety control module provides the adaptive cruise control system functionality. The active safety control module analyzes data from the long range radar sensor module, front short range radar sensor modules, and frontview camera module to identify and classify objects in the road environment. The system scans the road environment to detect targets within its specified field of view. The active safety control module then sends throttle and/or brake commands to the engine control module (ECM) and electronic brake control module (EBCM) via serial data in order to control the vehicle acceleration/deceleration based on the data from the modules. The ECM and EBCM provide throttle control and automatic braking needed for proper cruise speed adjustment. The following is a list of the active safety control module functions pertaining to the adaptive cruise control functionality:

- The active safety control module processes the road environment to get data concerning any vehicle ahead of the adaptive cruise control vehicle. Detection, parameter estimation, tracking, object classification and diagnostics are the primary functions. When an object is detected, the controller calculates the object range, range rate, acceleration and azimuth angle parameters.
- The active safety control module performs adaptive cruise control state processing automatically – distance control or speed control. The adaptive cruise control operates in 2 possible states – cruise or follow. The normal operating state is cruise, whereby the vehicle speed is controlled to match the driver selected set speed. When a preceding forward target is identified, the adaptive cruise control system will automatically transition into the follow speed state to provide proper lane spacing behind the target vehicle in front. The preceding vehicle's speed and acceleration, with the adaptive cruise control vehicle speed, acceleration and distance between the two vehicles will be used to determine the adaptive cruise control follow speed limit. The adaptive cruise control follow speed limit will ensure that an acceptable distance is maintained to the preceding vehicle.
- The active safety control module determines the follow speed limit for throttle control by the ECM.
- The active safety control module arbitrates the adaptive cruise control system brake and throttle control between the EBCM and the ECM.
- The active safety control module requests brake light activation during automatic braking.
- The active safety control module provides operational feedback to the vehicle driver. The active safety control module sends signals for telltales and messages to be displayed on the instrument cluster or driver information center.

Body Control Module

The following are the adaptive cruise control System functions provided by the body control module (BCM):

- The BCM provides a translating gateway for the high speed GMLAN serial data circuit.
- The BCM reads all cruise control switches and the gap switch. The active safety control module monitors a variety of user operated switches from the BCM switch status information sent via the GMLAN serial data circuit.
- The BCM illuminates the brake light based on a GMLAN message from the active safety control module during automatic braking.
- The BCM measures the brake pedal position and sends brake pedal travel status via GMLAN serial data circuit to the ECM. The ECM disengages the adaptive cruise control system when the brake is applied by the driver pressing the brake pedal.
- The BCM serves as a gateway to the instrument cluster and driver information center. The BCM will generate visual warnings based on high speed GMLAN serial data messages from the active safety control module.

Engine Control Module

The following are the adaptive cruise control system functions performed by the engine control module (ECM):

- The ECM provides the electronic throttle control to the adaptive cruise control System. The ECM is also responsible for determining when a driver is overriding the adaptive cruise control throttle position by pressing the accelerator pedal.
- The ECM processes the cruise control switch requests received via the GMLAN serial data circuit from the BCM. Engaging and disengaging the adaptive cruise control system are functions performed by the ECM.

- The ECM determines the driver selected vehicle speed. Unless the adaptive cruise control module requests a lower vehicle speed, the ECM will control the vehicle speed to the driver selected set speed.
- The ECM allows automatic braking without disengaging the adaptive cruise control.

Electronic Brake Control Module

The following are the adaptive cruise control System functions performed by the electronic brake control module (EBCM):

- The EBCM controls the operation of the Antilock Brake System.
- The EBCM provides automatic braking for the adaptive cruise control system. The active safety control module will request vehicle deceleration via high speed GMLAN serial data circuit.
- The EBCM determines when the driver–applied brake pressure is active. The EBCM will communicate this status via the GMLAN serial data circuit to the BCM.
- The EBCM releases vehicle automatic braking when there is a throttle override by the driver pressing the accelerator.
- The EBCM predicts brake temperatures. Due to automatic braking, the brake system may overheat. When the brakes are overheated, the EBCM requests the adaptive cruise control System to be temporarily shut down by the ECM until the brakes cool to a normal operating temperature.

Transmission Control Module

The transmission control module (TCM) provides a down shift to protect the brakes. When the TCM detects some driver braking activity or adaptive cruise control automatic braking activity, the TCM down shifts the vehicle transmission to increase engine braking. This helps reduce braking activity, extend brake pad life and reduce brake system overheating.

Instrument Cluster

The driver information center is a part of the instrument cluster and displays the adaptive cruise control system warning messages. The active safety control module requests messages to be displayed on the driver information center by sending a GMLAN request to the BCM. The BCM sends a GMLAN serial data request to the instrument cluster demanding the display of the warning message. When the message is acknowledged by the driver and the cause of the message resolved, the driver information center turns the message off. The adaptive cruise control system will not operate if the driver information center fails.

Cruise Control Switch

The cruise control switch, functionally is a common feature that is shared between the adaptive cruise control system and the regular cruise control system. The adaptive cruise control system will not operate if any cruise switch fails. The cruise control switch comprises the following cruise control function switches:

- On/Off switch
- Set/decrease switch
- Resume/increase switch

The cruise control function switches are arranged in a resistive ladder design whereby each switch function is set up with different resistance values. The BCM through the cruise control switch signal circuit detects a predetermined voltage value when any cruise control switch function is activated. The associated cruise control function signal detected by the BCM is then sent to the engine control module (ECM) as a GMLAN serial data circuit message. The ECM on receiving the message provides the cruise control function requested by the BCM. The ECM is responsible for recognizing and responding to cruise control switch requests sent by the BCM. The cruise control function switches are used by the ECM to communicate to the active safety control module the driver selected vehicle speed. The driver selected vehicle speed is communicated through GMLAN serial data circuit to the active safety control module and the BCM. The adaptive cruise control system engages and adjusts vehicle speeds based on the activation of the following cruise control function switches:

Cruise Control On/Off Switch

The BCM monitors the switch signal circuit in order to determine when the On/Off switch is disabled or activated. The BCM detects a predetermined voltage value on the switch signal circuit. The On/Off switch state is then relayed to the ECM via the GMLAN serial data circuit. The ECM sends the On/Off switch input status to the active safety control module. When the On/Off switch is turned ON, the adaptive cruise control system enters either a standby enabled or a standby disabled mode. The standby enabled mode indicates that every condition required for the adaptive cruise control system to function has been met, but the adaptive cruise control is not engaged. When the adaptive cruise control is in the standby disabled mode, the conditions necessary for the adaptive cruise control system to function has not been met. When the On/Off switch is turned OFF, the adaptive cruise control will enter the disabled mode. The adaptive cruise control will not activate in the disabled mode.

Cruise Control Set/Decrease Switch

The adaptive cruise control system is engaged when the adaptive cruise control On/Off switch is turned ON and the set/decrease switch is momentarily pressed and released . When the set/decrease switch is pressed, the selected vehicle speed is set to the current vehicle speed by the ECM. The vehicle speed must be at or greater than 40 km/h (25 MPH). The selected vehicle speed is displayed by the driver information center. While in the engaged state, the selected vehicle speed and the following distance can be adjusted. Pressing and holding the set/decrease switch, when the adaptive cruise control system is engaged, will decrease the selected vehicle speed without deactivating the adaptive cruise control. Momentarily pressing and releasing the set/decrease switch, when the adaptive cruise control is engaged, decreased the selected vehicle speed by 1.6 km/h (1 MPH) for each time that the set/decrease switch is pressed.

Cruise Control Resume/Increase Switch

The resume/increase switch is used in order to increase the selected vehicle speed when adaptive cruise control is active. The amount selected vehicle speed can be increased from the resume/increase switch depends on how long the switch is pressed. The presence of a slower moving vehicle in the path of the adaptive cruise control vehicle will limit the extent to which the selected vehicle speed can be achieved. If there is no preceding vehicle in front, limiting the adaptive cruise control vehicle acceleration, then the vehicle speed that is attained is the new selected vehicle speed. The current selected vehicle speed is displayed by the driver information center. Acceleration is terminated when the resume/increase switch is released. Momentarily pressing and releasing the resume/increase switch will allow the selected vehicle to accelerate in at 1.6 km/h (1 MPH) increments for each time that the resume/increase switch is momentarily pressed.

Gap Switch

The gap switch allows the driver to determine how closely the adaptive cruise control vehicle follows a target vehicle while adaptive cruise control is engaged. When the adaptive cruise control vehicle speed is being limited due to a slower travelling vehicle, the adaptive cruise control vehicle speed is automatically controlled to the follow speed limit. The gap switch has 3 following distance selections that range from 1–2 s. The gap switch following distance between the adaptive cruise control vehicle and the target vehicle is expressed in time as opposed to actual distance. The distance maintained for a selected gap will vary based on vehicle speed. The faster the vehicle speed, the further back you will follow. The gap setting can only be adjusted when the adaptive cruise control system is engaged. The gap switch is hard-wired to the BCM. Based on voltage variations, the BCM is able to read the gap switch selection and communicates the switch status on the GMLAN serial data circuit to the active safety control module. The gap switch is a momentary switch.

The initial push of the gap switch recalls the current setting and activates the display. Subsequent pushes of the gap switch will change the gap setting.

Driver Information Messages

Adaptive Cruise Control Temporarily Unavailable

The active safety control module will send this message if the adaptive cruise control has been disengage or disabled. There are many reasons that can cause this, some will also set DTCs. Check vehicle for DTCs and also check the adaptive cruise control enable and disengage scan tool data. Definitions of parameters can be found in active safety control module scan tool information.

Service Driver Assist System

This message can be set by either the active safety control module if there is a problem with the driver assist system or by the memory seat module if there is a problem with the haptic seat circuits. Check vehicle for DTCs.

Service Adaptive Cruise Control and Service Front Camera

The message is set if the active safety control module is not communicating to the instrument cluster. Check vehicle for DTCs.

Set Speed

The adaptive cruise control vehicle set speed is displayed at all times in the driver information center when adaptive cruise control is engaged. The active safety control module set speed display request is sent to the instrument cluster via the GMLAN serial data circuit.

Follow Distance

The driver information center displays the driver selected following distance when adaptive cruise control is engaged and the gap switch is active. The current follow distance setting is displayed in the driver information center for a few seconds after the gap switch is pressed to increase or decrease the following distance. The active safety control module follow distance display request is sent to the instrument cluster via the GMLAN serial data circuit.

Vehicle Ahead Indicator

The vehicle ahead indicator is displayed in the instrument cluster hen the radar identifies an in-path vehicle. The vehicle ahead indicator is a warning to the driver that a vehicle is ahead. The indicator also serves as a feedback to the driver that the radar is functioning properly. The active safety control module commands the display of the vehicle ahead indicator via a GMLAN serial data message to the instrument cluster. The vehicle ahead indicator only displays with the adaptive cruise control active and may sometimes display for stationary road objects.

Rear Vision Camera Description and Operation

The rear vision camera system consists of the rearview camera and the infotainment system.

When the transmission is placed into R, 12 V is applied to the reverse lamp control circuit by the body control module (BCM). The rearview camera monitors this circuit and when 12 V is seen, indicating that the transmission is in R, the rearview camera will activate. The rearview camera receives ignition voltage and a constant ground to power the camera. Video signal + and video signal – circuits carry the video image from the rearview camera to the infotainment system. Additionally, the video signal circuits are shielded to prevent any interference which may lead to a loss of video signal resolution and cause a degraded video image. The shield is grounded by the rearview camera.

The following conditions may cause a degraded rear vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

Safety Alert Seat Description and Operation

The active safety seat provides a vibration in the driver’s seat bottom cushion to alert the driver of a number of concerns. There are two motors providing the vibration and are located on the left and right sides of the seat cushion. Depending on the alert, either the left, right, or both motors will activate.

The active safety seat is made up of the following components:

- Seat Memory Control Module
- Haptic Seat Motor – Driver Left
- Haptic Seat Motor – Driver Right

Seat Memory Control Module

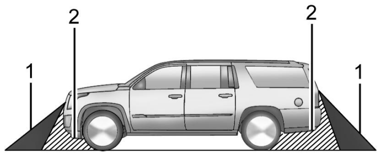
The seat memory control module receives serial data messages from other modules and provides a voltage output to activate haptic signal motors. The seat memory control module will pulse the left, right, or both motors with the number of pulses requested over serial data. The module monitors the circuits for open, short to ground, and short to voltage conditions and will set DTCs if a problem is detected.

Haptic Seat Motor

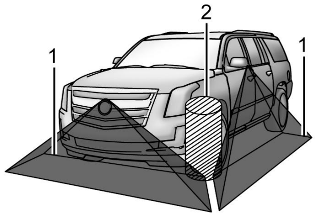
The motors are located in the driver’s seat bottom cushion and are positioned on the left and right sides. The motors are connected to ground and receive voltage from the seat memory control module.

Surround Vision Camera Description and Operation

Warning: The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding side mirrors that are out of position will not display surround view correctly. Always check around the vehicle when parking or backing.



1. View Displayed by the Surround Vision Camera
2. Area Not Shown



1. View Displayed by the Surround Vision Camera
2. Area Not Shown

The surround vision camera system consists of the following components:

- B87 Rearview Camera
- B174G Frontview Camera – Grille
- K157 Video Processing Control Module
- A11 Radio **OR** K74 Human Machine Interface Module
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right

When the vehicle is traveling at speeds slower than 6 mph (10kph) the video processing control module will power up the cameras and send a video signal to the radio or human machine interface module.

The following conditions may cause a degraded surround vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

Surround Vision displays an overhead view of the area surrounding the vehicle, along with the front or rear camera views in the center stack. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside rearview mirrors, and the rear vision camera is above the license plate.

Features of the Surround Vision System

- Rear camera (B87 Rearview Camera) view alongside overhead view is displayed in reverse
- Front camera (B174G Frontview Camera – Grille) view alongside overhead view is displayed after shifting out of reverse to Neutral or Drive
- Will display front view when front park assist object is within trigger range calibration value (30 cm (12 in) in a forward gear
- Image is removed from display when vehicle speed exceeds speed calibration (10kph/6 mph) or button press / screen touch

System Operation

The video processing control module sends voltage and a constant ground to power the cameras. Video signal + and video signal – circuits carry the video image from the cameras to the video processing control module for processing. The video processing control module will then send the processed image output to infotainment system by Video signal + and video signal – circuits. Additionally, all the video signal circuits are twisted and shielded to prevent any interference which may lead to a loss of video signal resolution and cause a degraded video image. These circuits must not be spliced/removed from shielding or will cause image degradation.

The video processing control module receives CAN information from Rear Park Assist object detection module and Steering Wheel angle from body control module during Reverse. A warning triangle may display during the 360 surround view screen if Rear Parking Assist has detected an object during a reverse. This triangle changes from amber to red and increases in size the closer the object. Also a dynamic guideline is displayed in Reverse to show the projected path of the vehicle.

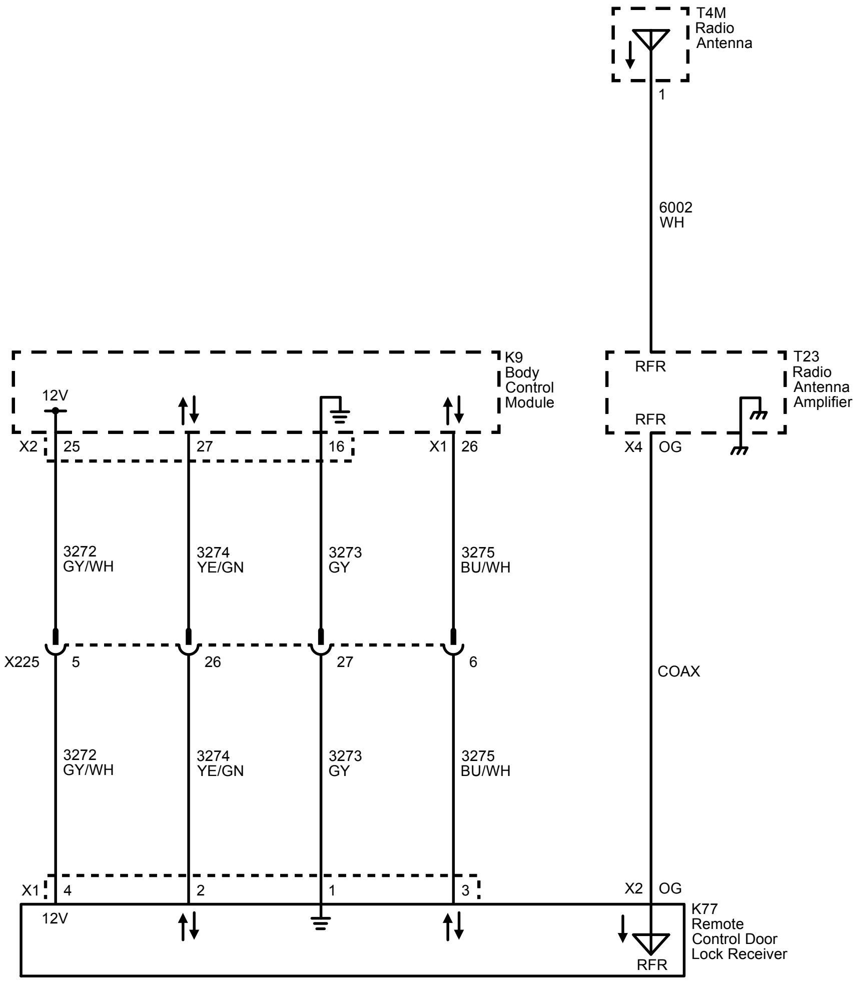
Safety and Security

Remote Functions

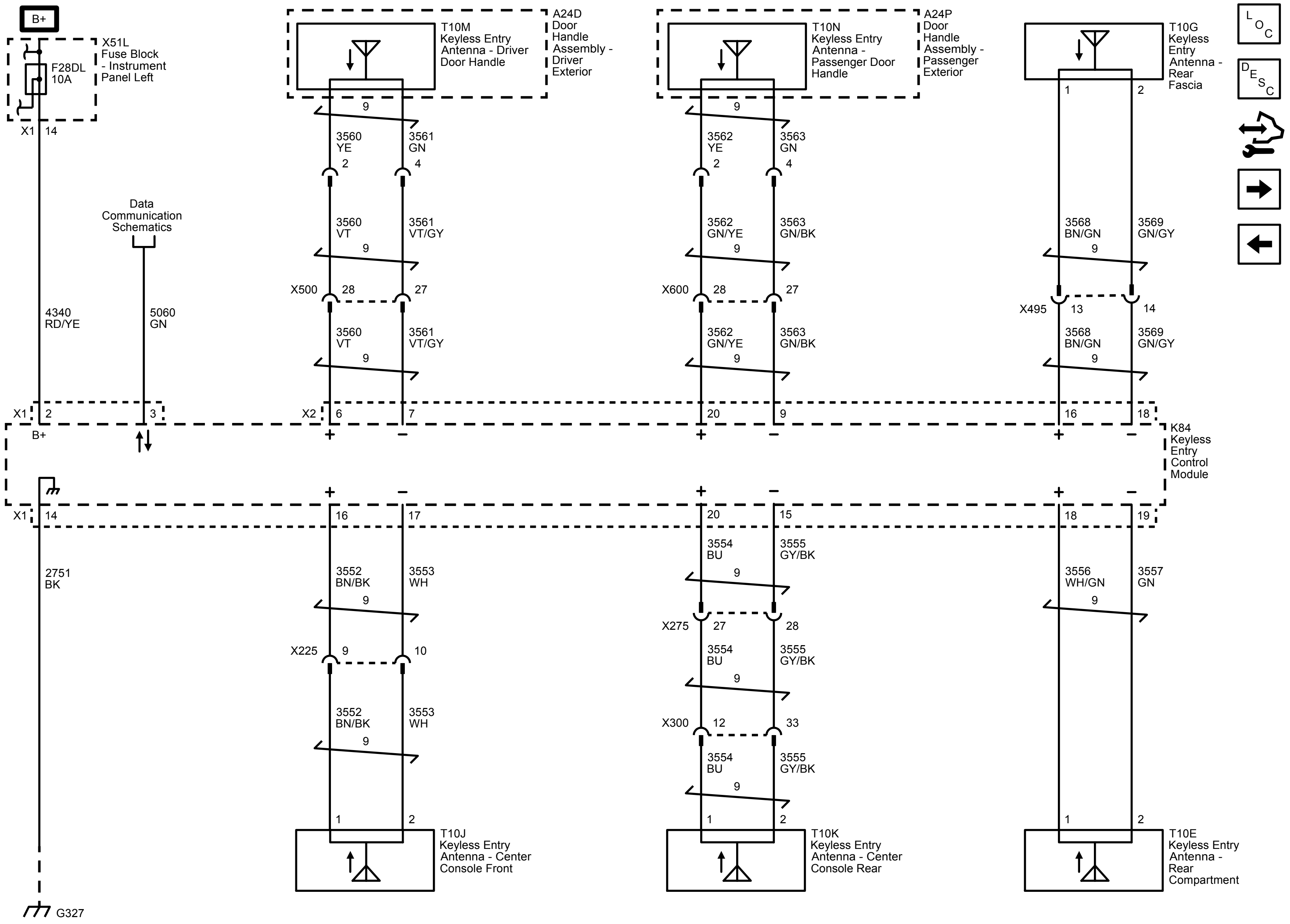
Schematic and Routing Diagrams

Remote Function Schematics

Keyless Entry - Active

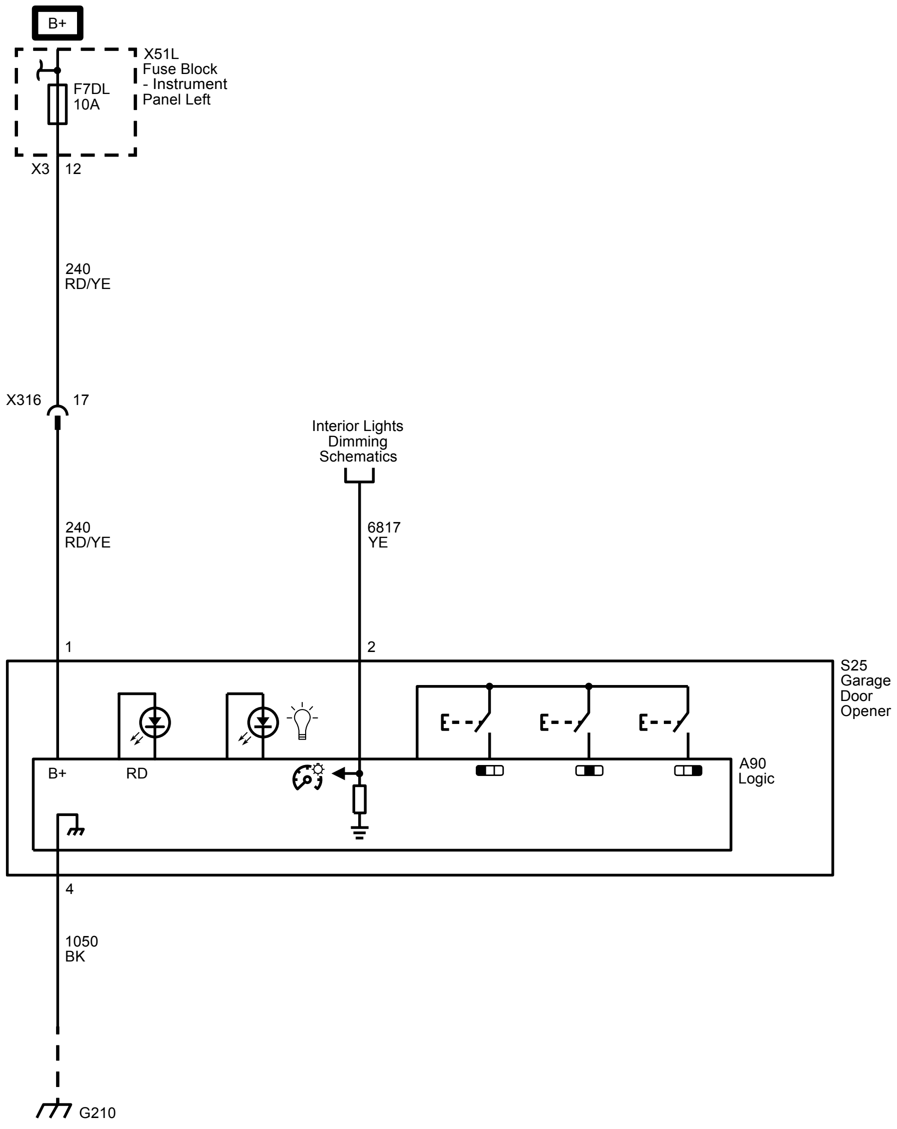

T4M
Radio
Antenna
1
6002
WH
K9
Body
Control
Module
12V
X2
25
27
16
X1
26
RFR
T23
Radio
Antenna
Amplifier
RFR
X4
OG
3272
GY/WH
3274
YE/GN
3273
GY
3275
BU/WH
X225
5
26
27
6
COAX
3272
GY/WH
3274
YE/GN
3273
GY
3275
BU/WH
X1
4
2
1
3
X2
OG
12V
K77
Remote
Control Door
Lock Receiver
RFR

Keyless Entry - Passive, and Keyless Start



B+
X51L
Fuse Block
- Instrument
Panel Left
F28DL
10A
X1 14
4340
RD/YE
Data
Communication
Schematics
5060
GN
T10M
Keyless Entry
Antenna - Driver
Door Handle
A24D
Door
Handle
Assembly -
Driver
Exterior
9
3560 YE 2
3561 GN 4
3560 VT
3561 VT/GY
X500 28 27
T10N
Keyless Entry
Antenna -
Passenger Door
Handle
A24P
Door
Handle
Assembly -
Passenger
Exterior
3562 YE 2
3563 GN 4
3562 GN/YE
3563 GN/BK
X600 28 27
T10G
Keyless
Entry
Antenna -
Rear
Fascia
1 2
3568 BN/GN
3569 GN/GY
X495 13 14
X1 2 3
X2 6 7 20 9 16 18
B+
K84
Keyless
Entry
Control
Module
X1 14
16 17 20 15 18 19
2751
BK
3552 BN/BK
3553 WH
X225 9 10
3554 BU
3555 GY/BK
X275 27 28
X300 12 33
3556 WH/GN
3557 GN
1 2
T10J
Keyless Entry
Antenna - Center
Console Front
T10K
Keyless Entry
Antenna - Center
Console Rear
T10E
Keyless Entry
Antenna -
Rear
Compartment
G327
LOC
DESC

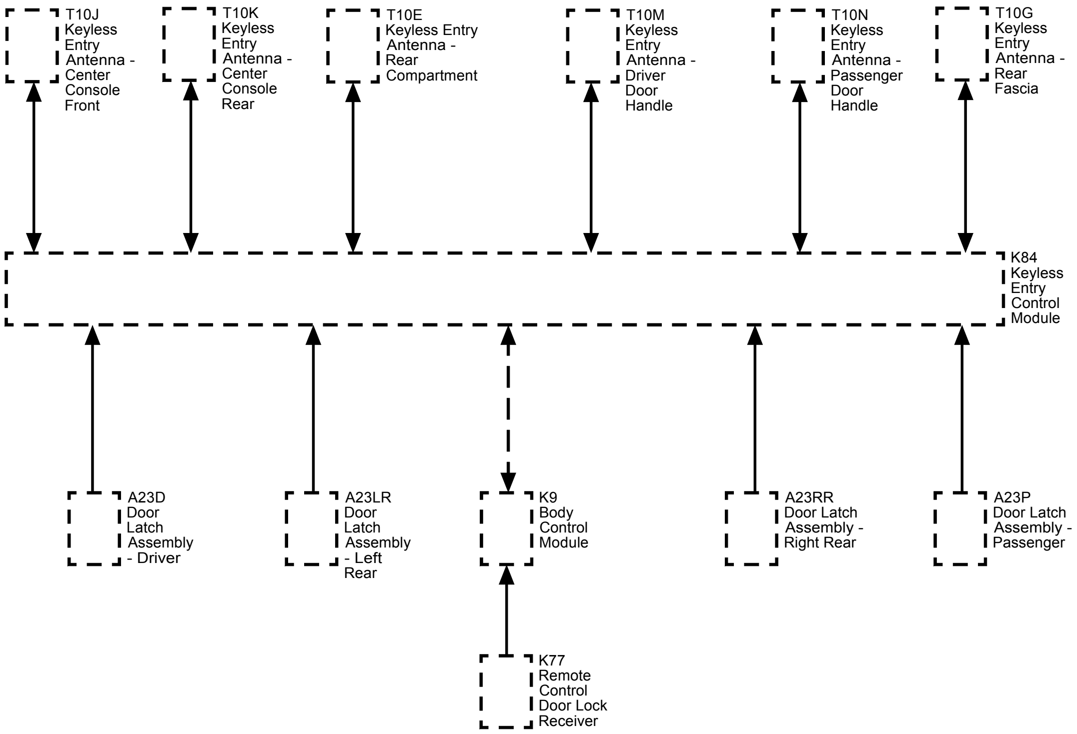
Garage Door Opener (UG1)


B+
X51L
Fuse Block
- Instrument
Panel Left
F7DL
10A
X3
12
240
RD/YE
X316
17
240
RD/YE
Interior Lights
Dimming
Schematics
6817
YE
1
2
S25
Garage
Door
Opener
B+
RD
A90
Logic
4
1050
BK
G210

Description and Operation

Keyless Entry System Description and Operation (With ATH)

Keyless Entry System Description and Operation Block Diagram


T10J Keyless Entry Antenna - Center Console Front
T10K Keyless Entry Antenna - Center Console Rear
T10E Keyless Entry Antenna - Rear Compartment
T10M Keyless Entry Antenna - Driver Door Handle
T10N Keyless Entry Antenna - Passenger Door Handle
T10G Keyless Entry Antenna - Rear Fascia
K84 Keyless Entry Control Module
A23D Door Latch Assembly - Driver
A23LR Door Latch Assembly - Left Rear
K9 Body Control Module
A23RR Door Latch Assembly - Right Rear
A23P Door Latch Assembly - Passenger
K77 Remote Control Door Lock Receiver

Keyless Entry System Description and Operation – Active

The keyless entry system is a vehicle entry device. The keyless entry system is used in conjunction with the door locks to unlock the vehicle. Keyless entry will lock/unlock a door or open the rear compartment lid when a corresponding button on the keyless entry transmitter is pressed. This is accomplished by the transmitter sending a radio frequency to the remote control door lock receiver antenna that has a direct link to the body control module (BCM). The BCM interprets the signal and activates the requested function or requests the appropriate ECU to activate the function via a serial data message. A low transmitter battery or radio frequency interference from aftermarket devices, such as 2-way radios, power inverters, computers, etc., may cause a system malfunction. High radio frequency traffic areas, such as gas stations that use pay-at-the-pump radio frequency transponders, may also cause interference that could lead to a malfunction. Keyless entry allows you to operate the following features:

- Door lock/unlock
- Rear compartment lid release
- Illuminated entry lamps
- Panic alarm/vehicle locator
- Remote vehicle start
- Automatic window express down, if equipped. Automatic window express up, if equipped

Keyless Entry System Description and Operation – Passive

Passive keyless entry allows entry to a locked vehicle without pressing any buttons on the keyless entry transmitter. The passive entry system use low frequency antennas in several different areas on the vehicle to determine the location of the transmitter. When passively opening a locked door or the rear compartment, you must have a programmed transmitter with you in your pocket, purse, or briefcase within a one meter range.

When an exterior door handle button is pressed or the rear compartment touch pad is pressed, the low frequency antenna sends out a challenge to the keyless entry transmitter. Because of the low frequency, communication range is limited. The antenna will emit the challenge in a one meter range. The transmitter must be within this range to receive the challenge. The transmitter receives this challenge and emits it's response as an RF message, which is received by the remote control door lock receiver. If the response is correct, entry into the vehicle will be allowed.

As a customer convenience feature, the keyless entry system will notify the driver if the transmitter has been left in the vehicle after exiting by chirping the vehicle horn three times. This may be turned off using vehicle personalization. Also, if the transmitter is left in the vehicle after the central door lock switch has been used to lock the vehicle, the driver door will remain unlock after exiting the vehicle. This is intended to prevent locking the transmitter in the vehicle and being unable to access it.

Keyless Entry System Description and Operation – Keyless Start

The keyless start portion of the keyless entry system allows vehicle starting, having only the transmitter as your key. The keyless start system use low frequency antennas in three different locations on the vehicle to determine the location of the transmitter. Multiple antenna are used to ensure complete coverage of the vehicle interior and rear compartment. When using the keyless start system, a programmed transmitter must be in the vehicle's interior, in the driver's pocket, purse, or briefcase.

When the ignition mode switch is pressed, the low frequency antennas emit a challenge to the keyless entry transmitter. The transmitter receives this challenge and emits it's response as an RF message, which is received by the remote control door lock receiver. If the response is correct, vehicle starting will be allowed. If RF communication is interrupted, a “No Remote Detected” message will be displayed on the DIC. In these cases, the transmitter can be placed in the transmitter pocket located in the center console, under the cupholder. The immobilizer antenna coil is located directly beneath the transmitter pocket. Placing the transmitter in the pocket will create a low powered coupling between the transmitter and immobilizer antenna, allowing communications to occur and enabling vehicle starting.

The keyless entry system has the following components:

- Keyless entry integrated key/transmitter
- Driver and front passenger door antennas (part of the door handle assembly)
- Driver and front passenger door handle switches (part of the door handle assembly)
- Rear fascia antenna
- Front console antenna
- Rear console antenna
- Trunk antenna (rear compartment)
- Body control module (BCM)
- Keyless entry control module
- Immobilizer antenna coil assembly
- Remote control door lock receiver

Keyless Entry Transmitters

By operating any of the exterior door handle buttons, a nearby transmitter is challenged by a keyless entry antenna. The transmitter will send an RF response to the remote control door lock receiver, which communicates with the BCM. The BCM will interpret this communication and either allow entry into the vehicle or deny it.

Door Antennas

The keyless entry door antennas are used to transmit low frequency communications to the keyless entry transmitters.

The keyless entry door antennas are located in the left front and right front exterior door handle bracket. The antennas are serviced as part of the door handle assembly. The antennas are controlled by the keyless entry control module. When the exterior door handle button is pressed, the respective antenna will send out a challenge to the keyless entry transmitter, which begins the passive entry communications.

Rear Fascia Antenna

The rear fascia antenna is used to transmit low frequency communication to the keyless entry transmitters for entry to rear compartment.

The rear fascia antenna is located behind the rear fascia. The antenna is controlled by the keyless entry control module. When the rear compartment touch pad is pressed, the antenna sends out a challenge to the keyless entry transmitter, which begins the passive entry communications.

Front Console Passive (Instrument Panel) Antenna

This antenna is located in the lower instrument panel near the front of the center console.

The front console antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Rear Console Antenna

This antenna is located in the rear of the center console.

The rear console antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Rear Compartment Antenna

This antenna is located in the center of the rear compartment metal floor pan, near the seatback.

The rear compartment antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Immobilizer Antenna Coil Assembly

The immobilizer coil assembly is located in the center console, directly beneath the transmitter pocket. If the transmitter battery is dead, weak, or the RF signal is being interrupted, the transmitter may be placed in the pocket to create a low powered coupling between the transmitter and immobilizer antenna, allowing communications to occur and enabling vehicle starting.

The immobilizer antenna coil is controlled by the BCM. The immobilizer control module is also active when learning vehicle keys.

Keyless Entry Control Module

The keyless entry control module is a multi-function module which performs the following keyless entry system functions:

- Activating vehicle antennas for passive keyless entry functions
- Activating vehicle antennas for keyless start functions
- Backup control for the ECM accessory wakeup and the run/crank relay
- If equipped, controls the electronic steering column lock
- Receiver of the exterior door handle switch inputs and door open switch (not the door ajar switch)
- Ignition mode switch monitoring

OnStar® Remote Link

A vehicle operator may have the ability to perform some of the keyless entry functions using applications on personal devices such as smart phones. Refer to OnStar Description and Operation (UE1)OnStar Description and Operation (UI3).

Body Control Module (BCM)

The BCM is a multi-function module that performs the following functions:

- Receive and authenticate active transmitter and keyless start signals from the remote control door lock receiver
- Determines the functionality requested by the transmitter signal
- Performs the function requested by the transmitter signal

Unlock Driver Door Only – Active

Momentarily press the transmitter UNLOCK button in order to perform the following functions:

- Unlock only the driver door
- Illuminate the interior lamps for a determined length of time, or until the ignition is turned ON
- Flash the exterior lights, if enabled through personalization
- Disarm the Content Theft Deterrent (CTD) system
- Deactivate the CTD system when in the alarm mode

Unlock All Doors – Second Operation – Active

Momentarily press the transmitter UNLOCK button a second time, within 5 seconds of the first press, to perform the following function:

Unlock the remaining doors

Unlock Driver Door Only – Passive

If enabled through personalization, approach the driver door with a valid keyless entry transmitter and press the door handle button to perform the following functions:

- Unlock and open only the driver door
- Disarm the CTD system, if equipped
- Deactivate the CTD system when in the alarm mode

Unlock All Doors – Passive

Approach any non driver door (front or rear) or, if enabled through personalization, the driver door with a valid keyless entry transmitter and press the door handle button to perform the following functions:

- Unlock all vehicle doors
- Disarm the CTD system, if equipped
- Deactivate the CTD system when in the alarm mode

Lock All Doors – Active

Press the transmitter LOCK button to perform the following functions:

- Lock all vehicle doors
- Immediately turn off the interior lamps
- Flash the exterior lights, if enabled through personalization
- Chirp the horn, if enabled through personalization
- Arm the CTD system

Lock All Doors – Passive

Exit the vehicle (with ignition off) with the keyless entry transmitter to automatically perform the following functions, if equipped.

- Lock all vehicle doors after a delay
- Flash the exterior lights, if enabled through personalization
- Chirp horn, if enabled through personalization
- Arm the CTD system

When all doors are closed, they can also be locked from the exterior by pressing a front door handle button while having a valid transmitter within range.

If more than one keyless entry transmitter is within a vehicle and the Keyless Entry System detects that one or more transmitters have been left in the vehicle after vehicle is locked, any transmitter left within the vehicle will be temporarily deactivated until:

- A button on the deactivated key fob is pressed (will only activate the fob whose button is pressed)
- A passive unlock of vehicle occurs
- Change in power mode occurs

Rear Compartment Lid Release – Active

If the vehicle transaxle is in PARK or NEUTRAL and the ignition is in the OFF position, a single press of the transmitter rear compartment release button will open the rear compartment lid.

Rear Compartment Lid Release – Passive

Approach the rear of the vehicle with a valid keyless entry transmitter. Press the rear compartment lid release touch pad. The rear compartment lid will open.

If vehicle is not equipped with trunk antenna, a keyless entry transmitter left inside the trunk will allow the trunk to be reopened at any time. This feature will not allow a customer to lock the transmitter in the trunk.

If vehicle has a trunk antenna and one or more transmitters are left in the trunk or interior of the vehicle, those transmitter(s) will be deactivated when the vehicle becomes locked.

Vehicle Locator/Panic Alarm/Active

A single press of the panic button performs the following functions. Some functions may be dependent on personalization settings:

- Pulses the horn three times
- Flashes the exterior lamps three times

A press and hold of the panic button performs the following functions:

- Pulses the horn and flashes the parking lamps for 30 second or until the following conditions occur:
  - The panic button is pressed
  - The ignition switch is turned to the RUN position with a valid key

Remote Vehicle Start/Active

The remote vehicle start function allows engine starting while not in the vehicle. It also allows the vehicle HVAC system and other vehicle systems to enable, providing a comfortable vehicle upon entry. The remote vehicle start sequence begins by pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the keyless entry transmitter. The turn signal lamps will illuminate to indicate the vehicle has received the remote start request. Each time a remote vehicle start is performed, the vehicle doors are locked, however they may then be unlocked/locked with the transmitter at any time. Only the first and second vehicle transmitters are able to control the remote vehicle start function. Any additional remote transmitters programmed to the vehicle will perform all other remote functions. Once activated, the engine is allowed to run for 10 minutes. The remote vehicle start time may be extended by an additional 10 minutes by again pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the transmitter. This feature is called a remote vehicle start continue and allows a maximum of 20 minutes of engine running. If the remote vehicle start continue is performed at 7 minutes into the initial 10 minute time-out, a total of 17 minutes of engine running would occur. The remote vehicle start event may be suspended at any time by pressing only the remote vehicle start button on the transmitter or by entering the vehicle and turning ON the hazard lamps.

In between ignition cycles, only two remote vehicle start events may occur or be attempted. Once two events or attempts have been made, future remote vehicle start events will be suspended until the vehicle is started using the ignition.

Enable/Disable Remote Vehicle Start/Active

Using the driver information center, remote vehicle start may be enabled or disabled as a part of vehicle personalization. Refer to the vehicle owners manual for more information.

Hood Ajar Switch/Active

The hood switch provides status of the hood to the BCM for remote vehicle start purposes. The switch is integrated into the hood latch assembly. The hood ajar switch provides 2 separate inputs to the BCM. These separate inputs allow the BCM to actively monitor for a hood ajar switch fault.

Remote Vehicle Start Circuit Description/Active

The BCM receives a signal from the keyless entry transmitter indicating a remote vehicle start request. The BCM uses the following inputs to verify the system is ready for a remote vehicle start event:

- Vehicle is not in valet mode
- All vehicle doors are closed
- Rear compartment lid is not ajar
- The hood is closed
- The doors are locked

- The hazard switch is OFF
- Battery reconnect has not occurred
- Vehicle power mode is correct

When the BCM determines all conditions meet those required for a remote vehicle start event, a message is sent via serial data to the ECM. The ECM relies on the remote vehicle start message from the BCM to enable remote vehicle start when the crank request signal is received. If the ECM does not receive a valid remote vehicle start message, it will not ground the control circuit of the crank relay and start the engine. While the ECM is in remote vehicle start mode it will cut fuel to the engine if any of the following additional conditions occur:

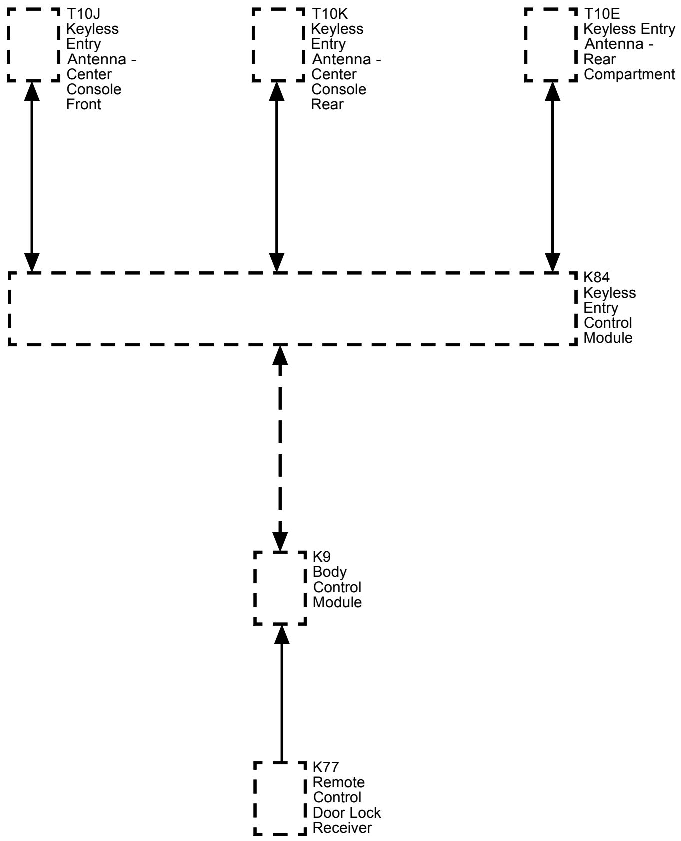
- Vehicle speed is greater than 0
- Transmission is not in P
- Excessive engine coolant temperature
- Low oil pressure
- The malfunction indicator lamp (MIL) is commanded ON
- Engine crank time is greater than 30 seconds
- Excessive engine speed
- Accelerator pedal position too high
- Remote start timer equals 0
- Immobilizer system indicates a theft attempt

Keyless Entry Personalization

Vehicle lock/unlock functions and remote vehicle start settings may be personalized for the vehicle. For functional descriptions and programming instructions, refer to the vehicle owners manual.

Keyless Entry System Description and Operation (Without ATH)

Keyless Entry System Description and Operation Block Diagram


T10J Keyless Entry Antenna - Center Console Front
T10K Keyless Entry Antenna - Center Console Rear
T10E Keyless Entry Antenna - Rear Compartment
K84 Keyless Entry Control Module
K9 Body Control Module
K77 Remote Control Door Lock Receiver

Keyless Entry System Description and Operation

The keyless entry system is a vehicle entry device. The keyless entry system is used in conjunction with the door locks to unlock the vehicle. Keyless entry will lock/unlock the vehicle doors or open the rear compartment lid when a corresponding button on the keyless entry transmitter is pressed. This is accomplished by the transmitter sending a radio frequency to the remote control door lock receiver antenna that has a direct link to the body control module (BCM). The BCM interprets the signal and activates the requested function or requests the appropriate control module to activate the function via a serial data message. A low transmitter battery or radio frequency interference from aftermarket devices, such as 2-way radios, power inverters, computers, etc., may cause a system malfunction. High radio frequency traffic areas, such as gas stations that use pay-at-the-pump radio frequency transponders, may also cause interference that could lead to a malfunction. Keyless entry allows you to operate the following features:

- Door lock/unlock
- Liftgate lock/unlock
- Power liftgate, if equipped
- Illuminated entry lamps
- Panic alarm/vehicle locator
- Remote vehicle start

Keyless Entry System Description and Operation – Keyless Start

The keyless start portion of the keyless entry system allows vehicle starting, having only the transmitter as your key. The keyless start system use low frequency antennas in three different locations on the vehicle to determine the location of the transmitter. Multiple antennas are used to ensure complete coverage of the vehicle interior and rear compartment. When using the keyless start system, a programmed transmitter must be in the vehicle's interior, in the driver's pocket, purse, or briefcase.

When the ignition mode switch is pressed, the low frequency antennas emit a challenge to the keyless entry transmitter. The transmitter receives this challenge and emits it's response as an RF message, which is received by the remote control door lock receiver. If the response is correct, vehicle starting will be allowed. If RF communication is interrupted, a “No Remote Detected” message will be displayed on the DIC. In these cases, the transmitter can be placed in the transmitter pocket located in the center console, under the storage tray. The immobilizer antenna coil is located directly beneath the transmitter pocket. Placing the transmitter in the pocket will create a low powered coupling between the transmitter and immobilizer antenna, allowing communications to occur and enabling vehicle starting.

The keyless entry system has the following components:

- Keyless entry transmitter
- Front console antenna
- Rear console antenna
- Rear compartment antenna
- Body control module (BCM)
- Keyless entry control module
- Immobilizer antenna coil assembly
- Remote control door lock receiver

Keyless Entry Transmitter

The keyless entry transmitters are used to perform various entry functions while away from the immediate area of the vehicle. Keyless entry functions may work at up to 20 m (65 ft) away from the vehicle. Ambient conditions may affect the performance of the keyless entry transmitter and reduce the range at which keyless entry functions operate. Up to eight transmitters may be programmed to a single vehicle.

When pressing the ignition mode switch to change power mode or start the vehicle, a nearby transmitter is challenged by a passive keyless entry antenna. The transmitter will send an RF response to the remote control door lock receiver, which communicates with the BCM. The BCM will interpret this communication and if the transmitter response is valid, allow the vehicle to change power mode or start the vehicle.

Front Console Passive (Instrument Panel) Antenna

This antenna is located in the lower instrument panel near the front of the center console.

The front console antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Rear Console Antenna

This antenna is located in the rear of the center console.

The rear console antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Rear Compartment Antenna

This antenna is located in the center of the rear compartment metal floor pan, near the seatback.

The rear compartment antenna is used for vehicle starting functions. When the ignition mode switch is pressed, the antenna is energized or "pinged". This emits a low frequency challenge signal that is received by the keyless entry transmitter. The transmitter will then reply to this challenge with a response and, if correct, vehicle starting will occur.

Remote Control Door Lock Receiver

The remote control door lock receiver is located on the vehicle windshield, directly in front of the inside rearview mirror.

The remote control door lock receiver is control by and directly communicates with the body control module (BCM). When the transmitter receives a low frequency challenge from an antenna, it responds with an RF message. This RF message is received by the remote control door lock receiver and communicated to the BCM. If the RF message is a valid response to the low frequency challenge, vehicle starting will be allowed.

Immobilizer Antenna Coil Assembly

The keyless entry immobilizer coil assembly is located in the center console, directly beneath the transmitter pocket. If the transmitter battery is dead, weak, or the RF signal is being interrupted, the transmitter may be placed in the pocket to create a low powered coupling between the transmitter and immobilizer antenna, allowing communications to occur and enabling vehicle starting.

The immobilizer antenna coil is controlled by the BCM. The immobilizer control module is also active when learning transmitters.

Keyless Entry Control Module

The keyless entry control module is a multi-function module which performs the following keyless entry system functions:

- Activating vehicle antennas for keyless start functions
- Backup control for the ECM accessory wakeup and the run/crank relay
- Redundant power moding, in addition to the BCM
- Ignition mode switch monitoring

OnStar® Remote Link

A vehicle operator may have the ability to perform some of the keyless entry functions using applications on personal devices such as smart phones. Refer to OnStar Description and Operation (UE1)OnStar Description and Operation (UI3).

Body Control Module (BCM)

The BCM is a multi-function module that performs the following functions:

- Receive and authenticate active transmitter and keyless start signals from the remote control door lock receiver
- Determines the functionality requested by the transmitter signal

- Performs the function requested by the transmitter signal

Unlock Driver Door Only

Momentarily press the transmitter UNLOCK button in order to perform the following functions:

- Unlock only the driver door
- Illuminate the interior lamps for a determined length of time, or until the ignition is turned ON
- Flash the exterior lights, if enabled through personalization
- Disarm the content theft deterrent system
- Deactivate the content theft deterrent system when in the alarm mode

Unlock All Doors – Second Operation

Momentarily press the transmitter UNLOCK button a second time, within 5 seconds of the first press, to perform the following function:

- Unlock the remaining doors and liftgate

Lock All Doors

Press the transmitter LOCK button to perform the following functions:

- Lock all vehicle doors and the liftgate
- Immediately turn off the interior lamps
- Flash the exterior lights, if enabled through personalization
- Chirp the horn, if enabled through personalization
- Arm the content theft deterrent system

Power Liftgate, if equipped

Press and hold the power liftgate button to perform the following functions:

- Open or close the liftgate using the power liftgate function
- Flash the tail lamps
- Sound the interior power liftgate chime

Vehicle Locator/Panic Alarm/Active

A single press of the panic button performs the following functions. Some functions may be dependent on personalization settings:

- Pulses the horn three times
- Flashes the exterior lamps three times

A press and hold of the panic button performs the following functions:

- A press and hold of the panic button performs the following functions:
- Pulses the horn and flashes the parking lamps for 30 second or until the following conditions occur:
  - The panic button is pressed
  - The ignition mode is turned to the RUN position with a valid keyless entry transmitter

Remote Vehicle Start/Active

The remote vehicle start function allows engine starting while not in the vehicle. It also allows the vehicle HVAC system and other vehicle systems to enable, providing a comfortable vehicle upon entry. The remote vehicle start sequence begins by pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the keyless entry transmitter. The turn signal lamps will illuminate to indicate the vehicle has received the remote start request. Each time a remote vehicle start is performed, the vehicle doors are locked, however they may then be unlocked/locked with the transmitter at any time. Only the first and second vehicle transmitters are able to control the remote vehicle start function. Any additional remote transmitters programmed to the vehicle will perform all other remote functions. Once activated, the engine is allowed to run for 10 minutes. The remote vehicle start time may be extended by an additional 10 minutes by again pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the transmitter. This feature is called a remote vehicle start continue and allows a maximum of 20 minutes of engine running. If the remote vehicle start continue is performed at 7 minutes into the initial 10 minute time-out, a total of 17 minutes of engine running would occur. The remote vehicle start event may be suspended at any time by pressing only the remote vehicle start button on the transmitter or by entering the vehicle and turning ON the hazard lamps.

In between ignition cycles, only two remote vehicle start events may occur or be attempted. Once two events or attempts have been made, future remote vehicle start events will be suspended until the vehicle is started using the ignition.

Enable/Disable Remote Vehicle Start/Active

On some vehicles, remote vehicle start may be enabled or disabled as a part of vehicle personalization by using the driver information center controls. Refer to the vehicle owners manual for more information.

Hood Ajar Switch/Active

The hood switch provides status of the hood to the BCM for remote vehicle start purposes. The switch is integrated into the hood latch assembly. The hood ajar switch provides 2 separate inputs to the BCM. These separate inputs allow the BCM to actively monitor for a hood ajar switch fault.

Remote Vehicle Start Circuit Description/Active

The BCM receives a signal from the keyless entry transmitter indicating a remote vehicle start request. The BCM uses the following inputs to verify the system is ready for a remote vehicle start event:

- Vehicle is not in valet mode
- All vehicle doors are closed
- Rear compartment lid is not ajar
- The hood is closed
- The doors are locked
- The hazard switch is OFF
- Battery reconnect has not occurred
- Vehicle power mode is correct

When the BCM determines all conditions meet those required for a remote vehicle start event, a message is sent via serial data to the ECM. The ECM relies on the remote vehicle start message from the BCM to enable remote vehicle start when the crank request signal is received. If the ECM does not receive a valid remote vehicle start message, it will not ground the control circuit of the crank relay and start the engine. While the ECM is in remote vehicle start mode it will cut fuel to the engine if any of the following additional conditions occur:

- Vehicle speed is greater than 0
- Transmission is not in P
- Excessive engine coolant temperature
- Low oil pressure
- The malfunction indicator lamp (MIL) is commanded ON
- Engine crank time is greater than 30 seconds
- Excessive engine speed
- Accelerator pedal position too high
- Remote start timer equals 0
- Immobilizer system indicates a theft attempt

Keyless Entry Personalization

Vehicle lock/unlock functions and remote vehicle start settings may be personalized for the vehicle. For functional descriptions and programming instructions, refer to the vehicle owners manual.

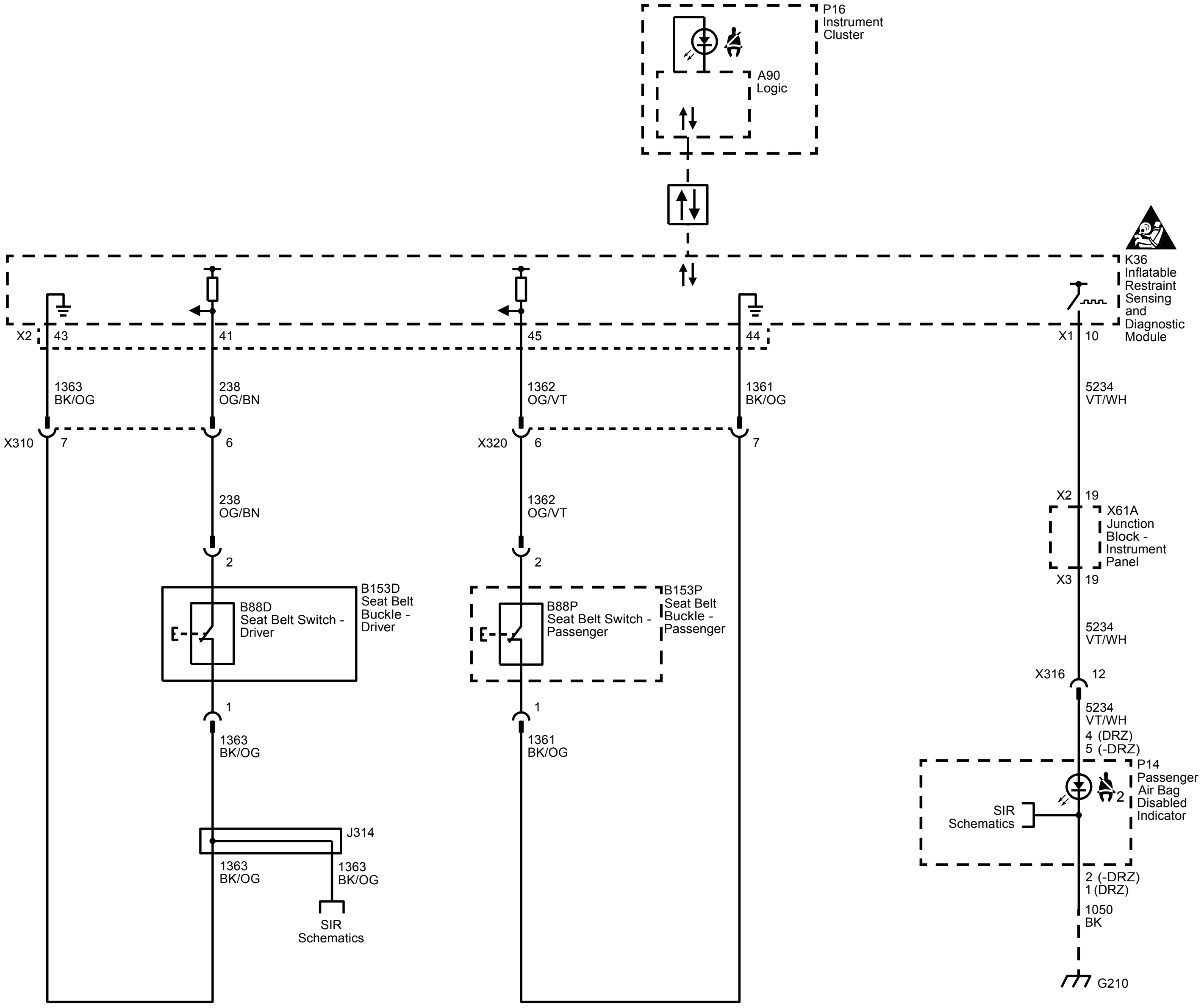
Safety and Security

Seat Belts

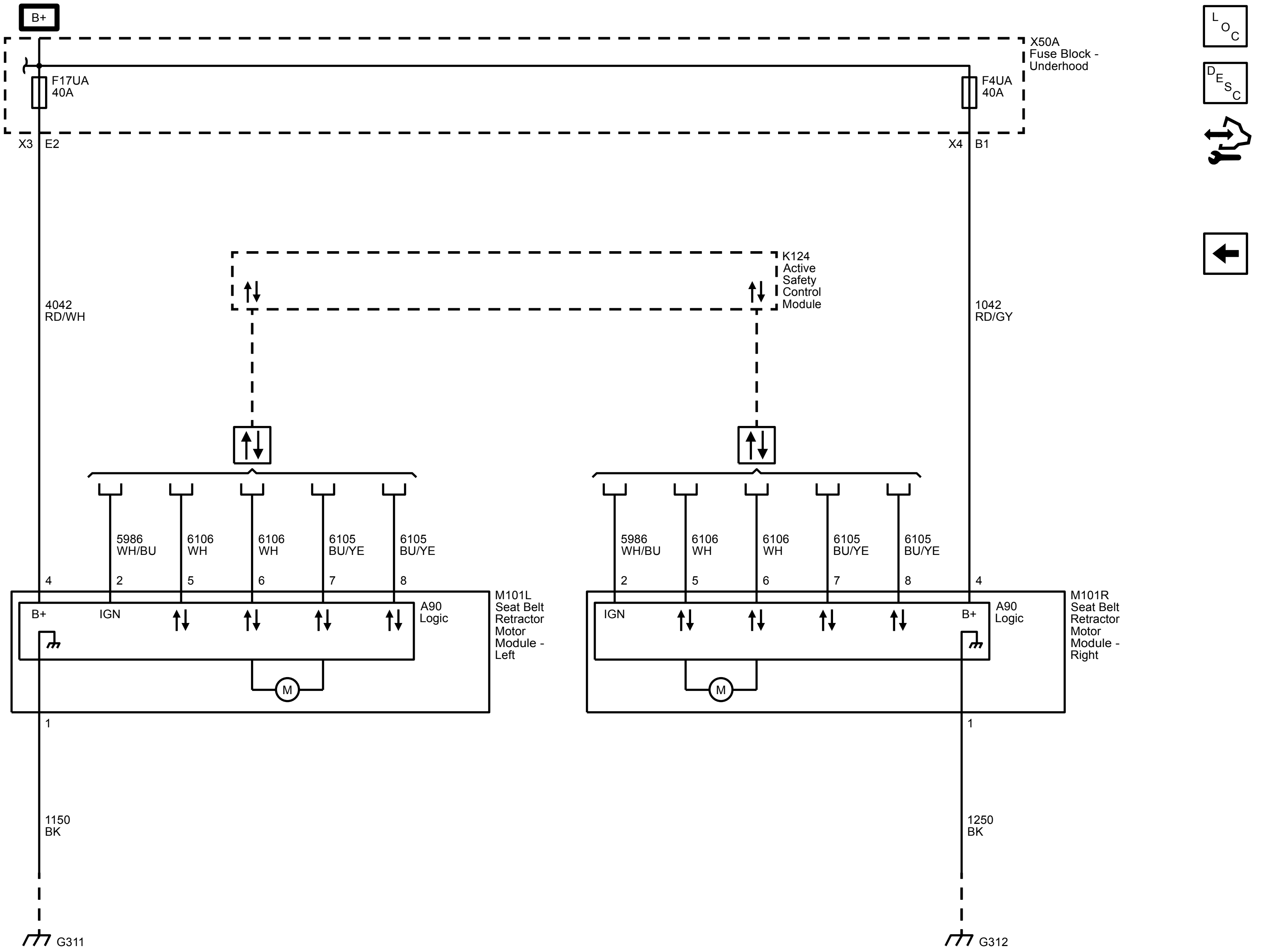
Schematic and Routing Diagrams

Seat Belt Schematics

Seat Belts



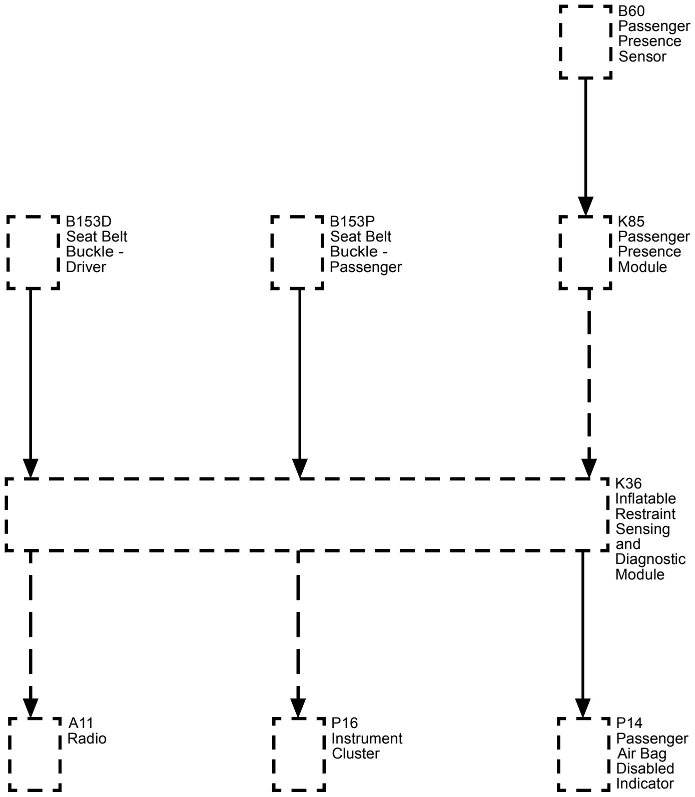
P16
Instrument
Cluster
A90
Logic
K36
Inflatable
Restraint
Sensing
and
Diagnostic
Module
X2
43
41
45
44
X1
10
1363
BK/OG
238
OG/BN
1362
OG/VT
1361
BK/OG
5234
VT/WH
X310
7
6
X320
6
7
238
OG/BN
1362
OG/VT
X2
19
X61A
Junction
Block -
Instrument
Panel
X3
19
2
2
B153D
Seat Belt
Buckle -
Driver
B88D
Seat Belt Switch -
Driver
B153P
Seat Belt
Buckle -
Passenger
B88P
Seat Belt Switch -
Passenger
5234
VT/WH
X316
12
1
1
5234
VT/WH
4 (DRZ)
5 (-DRZ)
1363
BK/OG
1361
BK/OG
P14
Passenger
Air Bag
Disabled
Indicator
SIR
Schematics
2
J314
1363
BK/OG
1363
BK/OG
SIR
Schematics
2 (-DRZ)
1 (DRZ)
1050
BK
G210


B+
X50A
Fuse Block -
Underhood
F17UA
40A
F4UA
40A
X3 E2
X4 B1
K124
Active
Safety
Control
Module
4042
RD/WH
1042
RD/GY
5986
WH/BU
6106
WH
6106
WH
6105
BU/YE
6105
BU/YE
4
2
5
6
7
8
B+
IGN
A90
Logic
M
M101L
Seat Belt
Retractor
Motor
Module -
Left
M101R
Seat Belt
Retractor
Motor
Module -
Right
1
1150
BK
1250
BK
G311
G312
L O C
D E S C

Description and Operation

Seat Belt System Description and Operation

Seat Belt with P14 Block Diagram


B60 Passenger Presence Sensor
B153D Seat Belt Buckle - Driver
B153P Seat Belt Buckle - Passenger
K85 Passenger Presence Module
K36 Inflatable Restraint Sensing and Diagnostic Module
A11 Radio
P16 Instrument Cluster
P14 Passenger Air Bag Disabled Indicator

Note: Not all items shown in block diagram are available in this publication

Restraint System

Note: If the vehicle has been in a collision, refer to CELL Link Error - Link target cell (cell ID 69000) is invalid for this publication.

The vehicle has front and rear seat belts that are the primary means of occupant restraint. Seat belts help to keep the occupants inside the passenger compartment and to gradually reduce the impact forces during the following events:

- Frontal impact type crashes
- Rear impact type crashes
- Side impact type crashes
- Roll-over type crashes

All seat belt retractors have emergency locks. The retractors remain unlocked during normal operation and under normal driving conditions. The retractors remain unlocked during normal conditions in order to allow free movement of the upper body of each occupant. A pendulum locks the seat belt webbing into position. The pendulum causes a locking bar to engage a cog on the spool of the retractor mechanism when the following conditions occur:

- A rapid extraction of the seat belt webbing from the retractor
- An abrupt change in vehicle speed
- An abrupt change in vehicle direction
- Operation of the vehicle on a steep upgrade

- Operation of the vehicle on a downgrade

The seat belts have an automatic locking (cinch) feature. The cinch feature is activated when the seat belt webbing is completely extended from the retractor. The cinch feature prevents the webbing from extending beyond the position from which it is allowed to retract. Use of the cinch feature is recommended for securing a child seat. The cinch feature may be cancelled by allowing the webbing to wind back completely into the retractor. After the cinch feature is cancelled, the webbing is unlocked. After the cinch feature is cancelled, the webbing will extend from the retractor. This vehicle is also equipped with a supplemental inflatable restraint (SIR) system. Refer to Supplemental Inflatable Restraint System Description and Operation

Motorized Seat Belts

A motorized seat belt is a seat belt with a motor coupled to the shoulder belt retractor. The motorized seat belt provides the driver and passenger a sense of safety and, in the case of severe braking or a crash, more quickly couples the occupant to the vehicle, enhancing the safety to the occupant.

Motorized seat belts monitor vehicle information to determine when to perform each of the following retractions

- Full retraction for such situations but not limited to: panic braking and or skidding
- Dynamic support for lateral and longitudinal dynamics

Preconditions for motorized seat belt retractions

- Seat belt buckle is latched
- Vehicle speed greater than or equal to 25 kph (16 mph)
- All messages on serial data are received as valid

Triggers that may cause motorized seat belt retractions

- Emergency Braking
- Sudden Emergency / Panic Braking
- High Vehicle Deceleration Detection
- Ice Braking Detection
- Oversteer and Understeer

Motorized seat belt inputs

- Vehicle Power Mode
- Transmission Gear
- Wheel Speeds
- Vehicle Acceleration
- Accelerator Pedal Position
- Steering Wheel Angle and Gradient
- Yaw Rate and Lat/Long Acceleration
- Brake Pedal Position, Gradient, Pressure, Initial Travel
- Vehicle Stability

Motorized seat belt output signals

- Driver information center message – motorized seat belt Failed “Service Automatic Seatbelt Tightening”
- Driver information center message – motorized seat belt Unavailable “Automatic Seatbelt Tightening Unavailable”

Motorized seat belt retractions are inhibited when seat belt unbuckled

Driver and passenger motorized seat belts operate independently

Front Seat Belt System

The front seat belt system includes a driver and passenger seat belt pretensioner retractor. Both front seat belt pretensioners includes a seat belt switch in the seat buckle which controls a reminder lamp and a tone alarm.

Note: The front passenger seat is equipped with a passenger presence detection sensor, which detects an occupant. If the passenger presence detection sensor detects an empty front passenger seat, then the passenger fasten safety belt indicator will be disabled.

- When the driver seat belt is buckled and the ignition switch is turned ON, the following events will occur:
  - The tone alarm will not operate.
  - The reminder lamp will not operate.
- When the driver seat belt is not buckled and the ignition switch is in the ON position, the following events will occur:
  - The tone alarm will operate for 4–8 seconds and then go OFF.

  - The fasten safety belt indicator will turn ON for 20 seconds, until the driver seat belt is buckled.

Rear Seat Belt System

The Rear Seat Belt System includes the following components:

- The rear seat belt retractor is located at the wheelhouse panel and attached to the floor panel by the rear seat shoulder belt retractor bracket.
- The rear seat belt buckles and the center seat belt buckle are attached to each seat.

Child Seat Restraint System

> **Warning: A child in a rear-facing child restraint can be seriously injured if the right-front passengers air bag inflates. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owners manual and the instruction that came with the child restraint.**

A child in a rear-facing child restraint can be seriously injured if the right-front passengers air bag inflates. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owners manual and the instruction that came with the child restraint.

The child seat may only be used in a forward facing seating location. The child seat should be installed and secured according to the manufacturer's directions. If the child seat has a top strap, the seat will need to be anchored. Passengers should not be allowed to sit at locations where the seat belts are being used to secure the child seat.

All vehicles are equipped with a dual-mode type retractor with emergency and automatic locking features. The automatic locking feature is for restraint of a child seat. The child seat can be secured by pulling the seat belt all the way out to lock it. Then tighten the seat belt around the child seat.

If a child seat is to be used in the second seat position, a special dealer-installed anchor must be used in order to anchor the child seat top strap. This only applies to the seats designed with the top strap provision and for the vehicles sold in Canada. In order to ensure the correct top strap angle, the child seat is only to be used at the seating position for which the top strap anchor is installed.

Fasten Safety Belt Indicators

There is a fasten safety belt indicator for this vehicle. The driver fasten safety belt reminder is displayed in the instrument cluster. The fasten safety belt indicator may only be ON during RUN. The fasten safety belt indicator illuminates under the following conditions:

- During the bulb check
- The inflatable restraint sensing and diagnostic module (SDM) sends the status of the driver seat belt to the instrument cluster via serial data. If any of the seat belts are unfastened, the instrument cluster will send a message requesting a chime sound to be turned ON after a bulb check.

Safety and Security

Supplemental Restraints

Description and Operation

Supplemental Inflatable Restraint System Description and Operation

SIR System Overview

The supplemental inflatable restraint (SIR) system supplements the protection offered by the seat belts. The SIR system contains an Inflatable Restraint Sensing and Diagnostic Module (SDM), air bags, seat belt pretensioner (anchor and retractor), and impact sensors. The Inflatable Restraint Sensing and Diagnostic Module determines the severity of a collision with the assistance of impact sensors located at strategic points on the vehicle. When the Inflatable Restraint Sensing and Diagnostic Module detects a collision, the Inflatable Restraint Sensing and Diagnostic Module will process the information provided by the sensors to further support air bag or pretensioner deployment. The Inflatable Restraint Sensing and Diagnostic Module will deploy the air bags and pretensioners if it detects a collision of sufficient force. If the force of the impact is not sufficient to warrant air bag deployment, the Inflatable Restraint Sensing and Diagnostic Module may still deploy the seat belt pretensioners. The Inflatable Restraint Sensing and Diagnostic Module contains a sensing device that converts vehicle velocity changes to an electrical signal. The Inflatable Restraint Sensing and Diagnostic Module compares these signals to values stored in memory. If the signals exceed a stored value, the Inflatable Restraint Sensing and Diagnostic Module will determine the severity of the impact and either cause current to flow through the frontal deployment loops deploying the frontal air bags and pretensioners, or it will deploy the pretensioners only. The Inflatable Restraint Sensing and Diagnostic Module continuously monitors the deployment loops for malfunctions and illuminates the SIR system AIR BAG indicator if a fault is detected. The Inflatable Restraint Sensing and Diagnostic Module performs continuous diagnostic monitoring of the SIR system electrical components. Upon detection of a circuit malfunction, the Inflatable Restraint Sensing and Diagnostic Module will set a DTC and inform the driver by illuminating the SIR system AIR BAG indicator. The steering column and knee bolsters are designed to absorb energy and compress during frontal collisions in order to limit leg movement and decrease the chance of injury to the driver and passenger.

SIR System AIR BAG Indicator

The SIR system AIR BAG indicator, located in the instrument cluster, is used to notify the driver of SIR system malfunctions and to verify that the Inflatable Restraint Sensing and Diagnostic Module (SDM) is communicating with the instrument cluster. When the ignition is turned ON, the Inflatable Restraint Sensing and Diagnostic Module is supplied with ignition positive voltage. The instrument cluster will momentarily turn on the SIR system AIR BAG indicator steady for 8 seconds. While the indicator is on, the Inflatable Restraint Sensing and Diagnostic Module conducts tests on all SIR system components and circuits. If no malfunctions are detected the Inflatable Restraint Sensing and Diagnostic Module will communicate with the instrument cluster through the serial data circuit and command the SIR system AIR BAG indicator OFF. The Inflatable Restraint Sensing and Diagnostic Module provides continuous monitoring of the air bag circuits by conducting a sequence of checks. If a malfunction is detected the Inflatable Restraint Sensing and Diagnostic Module will store a diagnostic trouble code (DTC) and command the instrument cluster to illuminate the SIR system AIR BAG indicator via serial data. The presence of a SIR system malfunction could result in non-deployment of the air bags or deployment in conditions less severe than intended. The SIR system AIR BAG indicator will remain ON until the malfunction has been repaired.

Inflatable Restraint Sensing and Diagnostic Module (SDM)

The Inflatable Restraint Sensing and Diagnostic Module (SDM) is a microprocessor and the control center for the supplemental inflatable restraint (SIR) system. The Inflatable Restraint Sensing and Diagnostic Module contains internal sensors along with external impact sensors, mounted at strategic locations on the vehicle. In the event of a collision, the Inflatable Restraint Sensing and Diagnostic Module compares the signals from the internal and external impact sensors to a value stored in memory. When the generated signals exceed the stored value, the Inflatable Restraint Sensing and Diagnostic Module will cause current to flow through the appropriate deployment loops to deploy the air bags. The Inflatable Restraint Sensing and Diagnostic Module records the SIR system status when a deployment occurs and illuminates the SIR system AIR BAG indicator located in the instrument cluster. The Inflatable Restraint Sensing and Diagnostic Module performs continuous diagnostic monitoring of the SIR system electrical components and circuitry when the ignition is turned ON. If the Inflatable Restraint Sensing and Diagnostic Module detects a malfunction, a DTC will be stored and the Inflatable Restraint Sensing and Diagnostic Module will request the instrument cluster to illuminate the SIR system AIR BAG indicator, notifying the driver that a malfunction exists. In the event that ignition positive voltage is lost during a collision, the Inflatable Restraint Sensing and Diagnostic Module maintains a 23-volt loop reserve for deployment of the air bags. It is important when disabling the SIR system for servicing or rescue operations to allow the 23-volt loop reserve to dissipate, which could take up to 1 minute.

Air Bags

This vehicle contains 7 air bags. The 7 air bags are located in the steering wheel (dual air bags), instrument panel (passenger side) (dual air bags), driver side seat inboard side, driver side seat outboard side, passenger side (seat), left roof rail, right roof rail. To view the locations of the air bags refer to Master Electrical Component List. Air bags contain a housing, inflatable air bag, two initiating devices (if dual air bags), canister of gas generating material and, in some cases, stored compressed gas. The deployment loops supply current to deploy the air bags. The steering wheel and passenger instrument panel air bags have two stages of deployment, which varies the amount of restraint to the occupant according to the collision severity. For moderate frontal collisions the air bags deploy at less than full deployment which consists of stage 1. For more severe frontal collisions a full deployment is initiated which consists of stage 1 and stage 2 of the air bags. The current passing through the air bags ignite the material in the canister producing a rapid generation of gas and is some cases, the release of compressed gas. The gas produced from this reaction rapidly inflates the air bag. Once the air bag is inflated it quickly deflates through the air bag vent holes and/or the bag fabric. A shorting bar (if equipped) is located in the connector.

Seat Belt Pretensioner (Anchor and Retractor)

The seat belt pretensioner (driver and passenger) consist of a housing, seat belt retractor (located in the B-pillar), seat belt anchor (located in the seat), seat belt webbing, an initiator, and a canister of gas generating materials. To view the locations of the seat belt pretentioners refer to Master Electrical Component List. The initiator is part of the seat belt pretensioner deployment loop. When the vehicle is involved in a collision of sufficient force, the Inflatable Restraint Sensing and Diagnostic Module causes current to flow through the seat belt deployment loops to the initiator. Current passing through the initiator ignites the material in the canister producing a rapid generation of gas. The gas produced from this reaction deploys the seat belt pretensioners which removes all of the slack in the seat belts. Depending on the severity of the collision, the seat belt pretensioners may deploy without the frontal air bags deploying, or they will deploy immediately before the frontal air bags deploy. A shorting bar (if equipped) is located in the connector.

Impact Sensors

There are multiple impact sensors which may be located in the front of the vehicle, in the front doors or on the B-pillar, and on the C-pillar depending on the vehicle configuration. To view the locations of the impact sensors refer to Master Electrical Component List. The front of vehicle, B-pillar, and C-pillar impact sensors contain a sensing device which monitors vehicle acceleration to detect collisions that are severe enough to warrant air bag deployment. The front door impact sensors contain a sensing device which monitors the door cavity air pressure change to detect side collisions that are severed enough to warrant air bag deployment. It is important when working on components in the door to make sure any items which have a sealing impact on the door (water deflector, exterior door handle, speaker, door harness grommet, or sealing strip) are securely fastened when reinstalled. The impact sensors are not part of the deployment loop, but instead provide input to the Inflatable Restraint Sensing and Diagnostic Module (SDM). The Inflatable Restraint Sensing and Diagnostic Module contains a microprocessor that performs calculations using the measured inputs from acceleration and pressure sensors. When the generated calculations exceed the stored value, the Inflatable Restraint Sensing and Diagnostic Module will cause current to flow through the deployment loops deploying the appropriate air bags.

Passenger Presence System and Passenger Air Bag Indicator (If Equipped)

Note: Note: The passenger presence system is a calibrated unit. When replacing the assembly all parts in the service kit must remain together. Do not mix any of the old parts with the new parts.

The passenger presence system is used to monitor the weight of an occupant in the front passenger seat and communicate the status to the inflatable restraint sensing and diagnostic module (SDM) whether to enable or suppress the deployment of the passenger instrument panel air bag. The passenger presence system consist of an passenger presence module , silicone filled sensor pad, passenger seat belt tension sensor, wiring harness, and

PASSENGER AIR BAG ON/OFF indicators. The silicone filled sensor pad is located under the passenger seat foam cushion and is connected by a hose clamped to the passenger presence module. The weight of the occupant sitting in the front passenger seat is measured as a pressure change within the bladder by the passenger presence module. If the pressure from the occupants weight is less than a specified value, the passenger presence module will send a suppress signal to the inflatable restraint sensing and diagnostic module to disable the passenger instrument panel air bag. If the pressure from the occupants weight is higher than a specified value, the passenger presence module will send an enable signal to the inflatable restraint sensing and diagnostic module to enable the passenger instrument panel air bag. The inflatable restraint sensing and diagnostic module will notify the customer of the enable/disable status by turning ON one of the PASSENGER AIR BAG ON/OFF. The passenger presence system monitors itself for faults and will displays diagnostic trouble codes (DTCs) on the scan tool. When a fault is detected, the passenger presence module sends out a message to the inflatable restraint sensing and diagnostic module. The inflatable restraint sensing and diagnostic module responds by sending a command message to the instrument cluster to illuminate the SIR system AIR BAG indicator.

Seat Belt Indicators

The seat belt indicators are controlled through the Inflatable Restraint Sensing and Diagnostic Module (SDM). For further information on seat belt indicators refer to Seat Belt System Description and Operation

Safety and Security

Theft Deterrent

Description and Operation

Theft Systems Description and Operation

When armed, the content theft deterrent (CTD) system is designed to deter vehicle content theft by pulsing the horns and exterior lamps for approximately 30 seconds when an unauthorized vehicle entry is detected. However, the CTD system does not affect engine starting.

An unauthorized entry can be any of the following with the CTD system armed:

- When any door is opened without first being unlocked using the keyless entry transmitter
- After a battery reconnect, if the battery was disconnected with the CTD system armed

The components of the CTD system are:

- Body Control Module (BCM)
- Security indicator
- Door ajar switches
- Liftgate ajar switch

Arming the CTD System

Use the following procedure in order to arm the system:

1. Place the shift lever in P (park).
2. Turn OFF the ignition.
3. Open any door.

Important: The system is not armed if the doors are locked manually; the power door lock switch or remote keyless entry transmitter must be used to arm the content theft deterrent (CTD) system.

4. Lock the doors with the LOCK button on the transmitter. The system is in standby mode and will not start the arming timer until all doors are closed.
5. The system will begin the arm sequence immediately after the last door is closed. If the keyless entry transmitter is used to arm the system after the vehicle doors are closed, the arm sequence will begin as soon as the LOCK command is received from the transmitter.

Locking the Vehicle Without Arming the CTD System

Locking the vehicle may be accomplished without arming the content theft deterrent (CTD) system. Use of the manual door locks or using the key to lock the doors will lock the vehicle, but will not arm the CTD system.

Disarming an Armed System/Silencing an Alarm

If system arming has been requested by the power door lock switch or the keyless entry transmitter, it must be disarmed.

Important: Using the power door unlock switch or manually unlocking the doors does not disable the content theft deterrent (CTD) arm mode. Also, disconnecting the battery or pulling fuses does not disable the arm mode, since the BCM stores the CTD mode status in memory.

- To disarm the CTD system in standby mode, perform one of the following:
  - Press the UNLOCK button on the keyless entry transmitter.
  - Insert a valid key into the ignition and switch to the ON position.
- To disarm the CTD system in the armed mode (non-event) or when activated (during an alarm event):
  - Press the UNLOCK button on the keyless entry transmitter.
  - Insert a valid key into the ignition and switch to the ON position

CTD Circuit Description

The following is a description of each component used in the content theft deterrent (CTD) system:

Body Control Module (BCM)

The CTD system is an internal function of the BCM which utilizes serial data and various switch inputs information to perform CTD functions. When the BCM detects an unauthorized entry, it activates the horns and exterior lamps. The BCM has 4 basic modes (disarmed, standby, armed, and alarm) for operating the CTD system. The different modes are described below.

1. The BCM has the CTD system in a disarmed mode until the following conditions are detected:
   - Ignition key turned to the OFF position.
   - Doors locked by either the power door lock switch or the LOCK button on the transmitter.
2. The BCM enters the standby mode when the above conditions are detected. If a door was already opened when the arm mode was requested, the standby mode does not start the timer until the last door is closed.
3. When the last door is closed, a 15 second timer is activated. Once the timer has expired, the BCM enters the armed mode. After this delay, any forced entry activates the alarm mode.
4. When the BCM detects a forced entry, the BCM enters the alarm mode. The BCM activates the horns and exterior lamps for 30 seconds. This is followed by a three minute time-out with the horn no longer active. If no new intrusions are detected after the time-out, the horn is not active. The system must be disarmed or the intrusion condition removed after the time-out for the system to exit alarm mode.

Security Indicator

The security indicator is illuminated on the instrument panel cluster (IPC) by the BCM for CTD or the immobilizer system. The CTD system uses the security indicator to inform the driver of system status prior to arming. The security indicator on the instrument cluster is controlled by both the CTD system and the immobilizer system.

- The CTD system, integral to the BCM, commands the IPC to control the security indicator only when the ignition switch is OFF. The CTD system uses the indicator to identify system status.
- The immobilizer system commands the IPC to control the security indicator only when the ignition switch is ON as a malfunction indicator. The immobilizer system is to deter vehicle theft. Refer to CELL Link Error - Link target cell (cell ID 158436) is invalid for this publication. for more information on the immobilizer system.

Liftgate Ajar Switch

The CTD system uses the liftgate ajar switch as a status indicator to activate the alarm. The liftgate ajar switch is monitored by the BCM via a discrete input. If the BCM receives a signal indicating a liftgate is opened when the CTD system is armed, the BCM activates the alarm.

Door Ajar Switches

The CTD system uses the door ajar switches as a status indicator to activate the alarm. The door ajar switches are monitored by the BCM via a discrete input from each door ajar switch. If the BCM receives a signal indicating a door is opened when the CTD system is armed, the BCM activates the alarm.

Inputs

The BCM monitors the following inputs for CTD:

- The door ajar switches
- The liftgate ajar switch
- The keyless entry transmitter LOCK/UNLOCK buttons
- The immobilizer status—The BCM uses the immobilizer status for disarming the system or silencing an alarm when the correct vehicle key is used to start the vehicle

Outputs

The BCM controls the following for CTD:

- The horn relay
- The exterior lamps

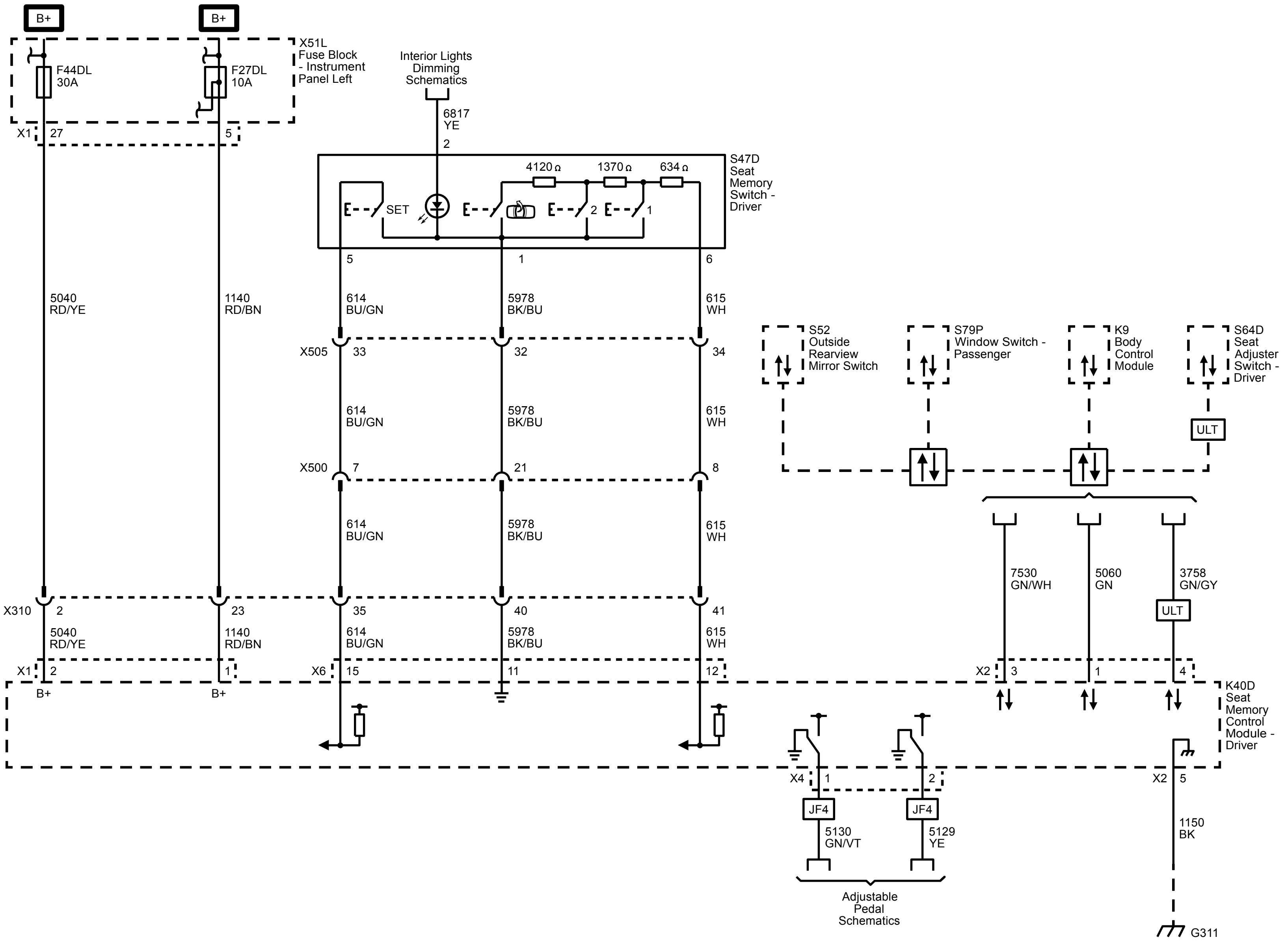
Seats

Power Seats

Schematic and Routing Diagrams

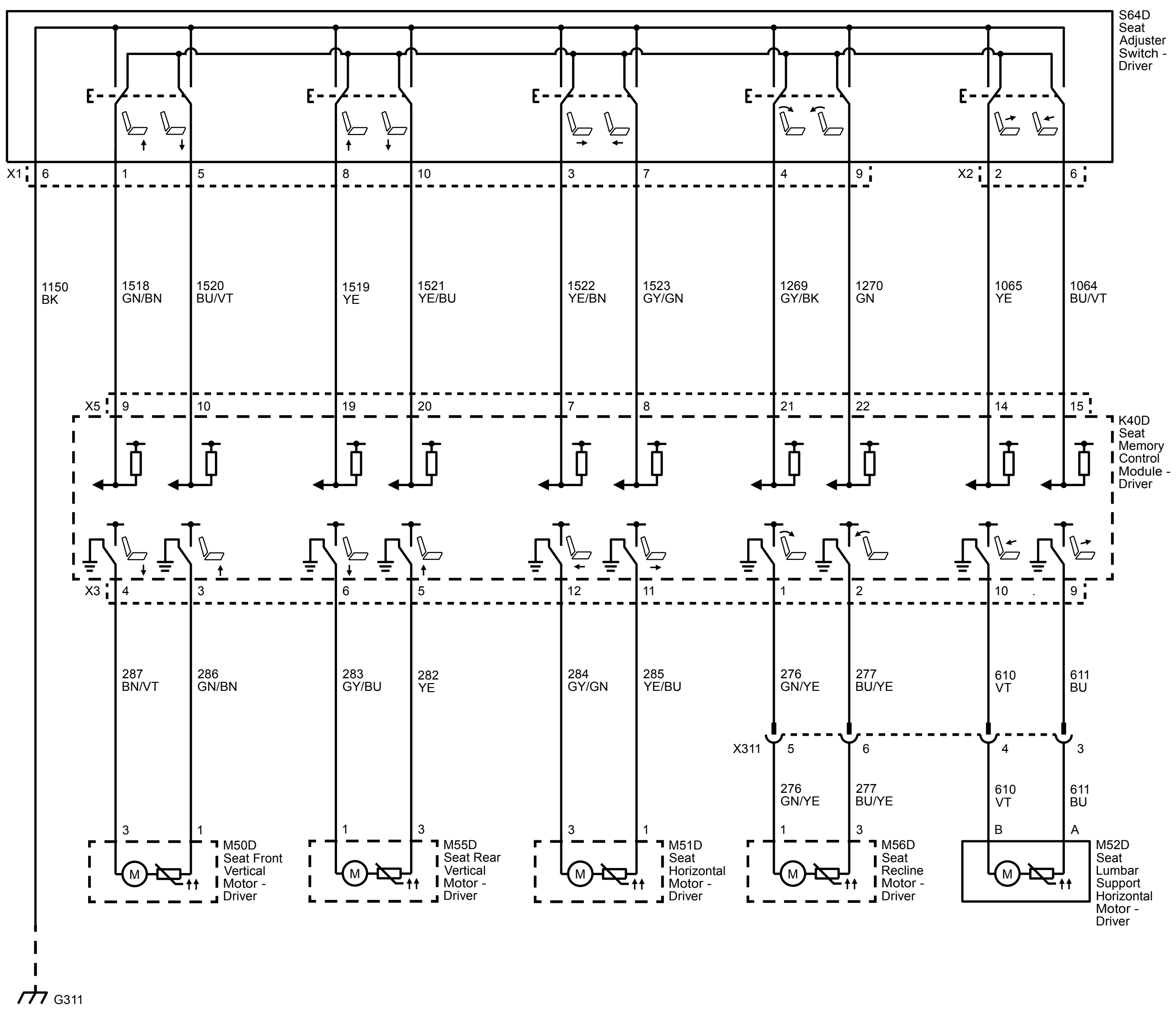
Driver Seat Schematics

Power, Ground, Serial Data and Memory Switch (A45)

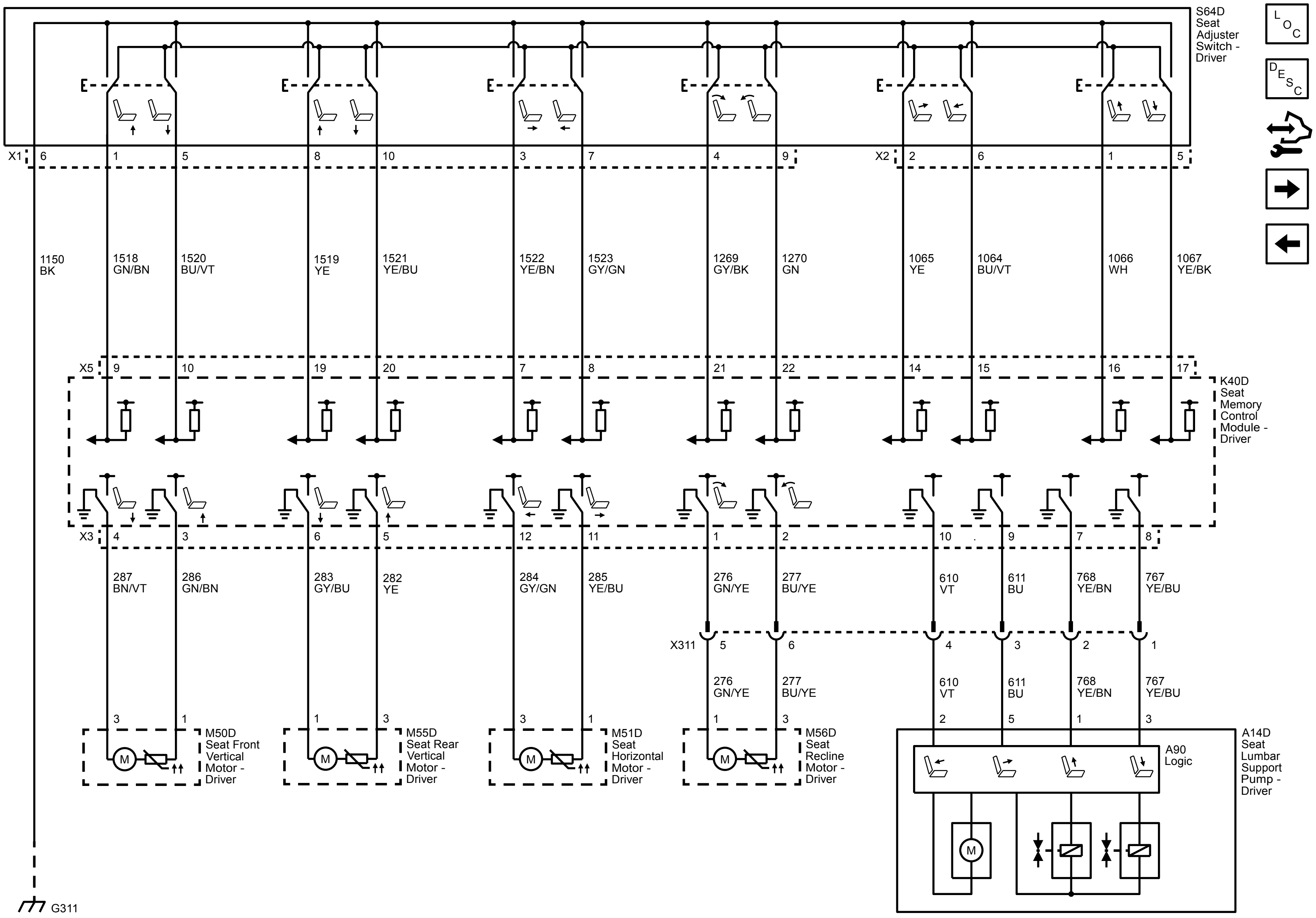


B+
B+
F44DL
30A
F27DL
10A
X51L
Fuse Block
- Instrument
Panel Left
X1
27
5
Interior Lights
Dimming
Schematics
6817
YE
2
4120 Ω
1370 Ω
634 Ω
SET
2
1
S47D
Seat
Memory
Switch -
Driver
5
1
6
5040
RD/YE
1140
RD/BN
614
BU/GN
5978
BK/BU
615
WH
X505
33
32
34
614
BU/GN
5978
BK/BU
615
WH
X500
7
21
8
614
BU/GN
5978
BK/BU
615
WH
S52
Outside
Rearview
Mirror Switch
S79P
Window Switch -
Passenger
K9
Body
Control
Module
S64D
Seat
Adjuster
Switch -
Driver
ULT
7530
GN/WH
5060
GN
3758
GN/GY
ULT
X310
2
23
35
40
41
5040
RD/YE
1140
RD/BN
614
BU/GN
5978
BK/BU
615
WH
X1
2
1
X6
15
11
12
X2
3
1
4
B+
B+
K40D
Seat
Memory
Control
Module -
Driver
X4
1
2
X2
5
JF4
JF4
5130
GN/VT
5129
YE
1150
BK
Adjustable
Pedal
Schematics
G311

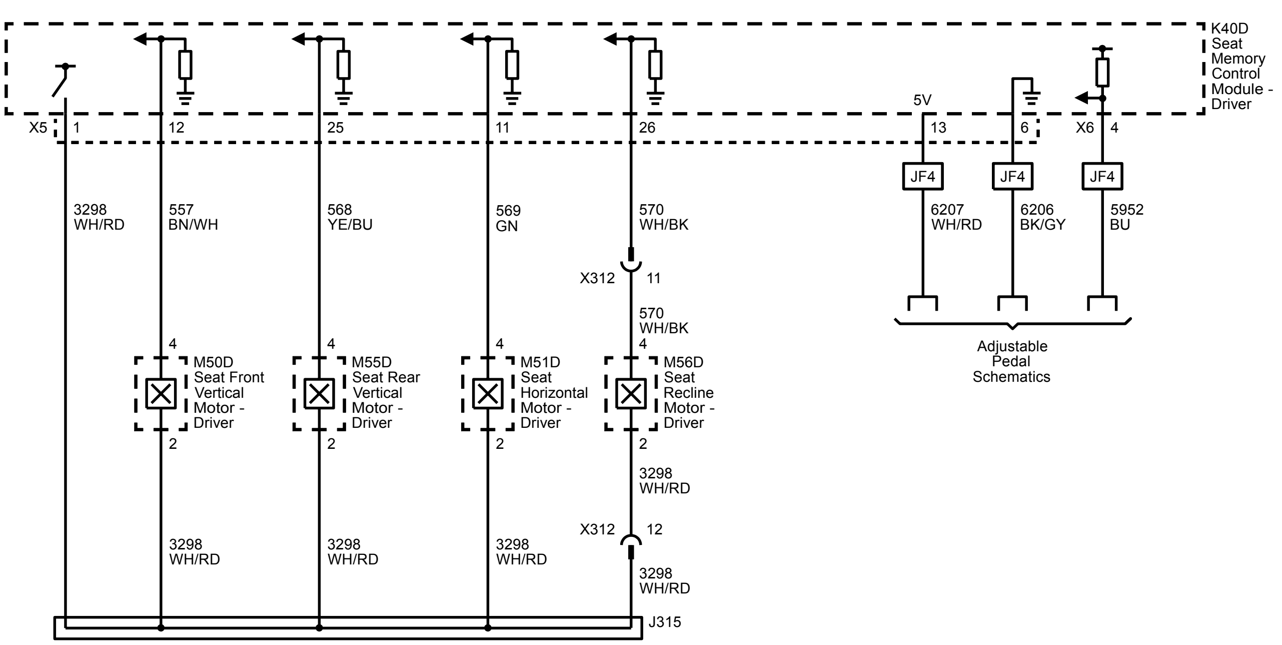
Controls and Motors (A45, without Y91 or Z75)


S64D
Seat
Adjuster
Switch -
Driver
X1
6
1
5
8
10
3
7
4
9
X2
2
6
1150
BK
1518
GN/BN
1520
BU/VT
1519
YE
1521
YE/BU
1522
YE/BN
1523
GY/GN
1269
GY/BK
1270
GN
1065
YE
1064
BU/VT
X5
9
10
19
20
7
8
21
22
14
15
K40D
Seat
Memory
Control
Module -
Driver
X3
4
3
6
5
12
11
1
2
10
9
287
BN/VT
286
GN/BN
283
GY/BU
282
YE
284
GY/GN
285
YE/BU
276
GN/YE
277
BU/YE
610
VT
611
BU
X311
5
6
4
3
276
GN/YE
277
BU/YE
610
VT
611
BU
3
1
1
3
3
1
1
3
B
A
M
M50D
Seat Front
Vertical
Motor -
Driver
M
M55D
Seat Rear
Vertical
Motor -
Driver
M
M51D
Seat
Horizontal
Motor -
Driver
M
M56D
Seat
Recline
Motor -
Driver
M
M52D
Seat
Lumbar
Support
Horizontal
Motor -
Driver
G311

Controls and Motors (A45, with Y91 or Z75 without ULT)

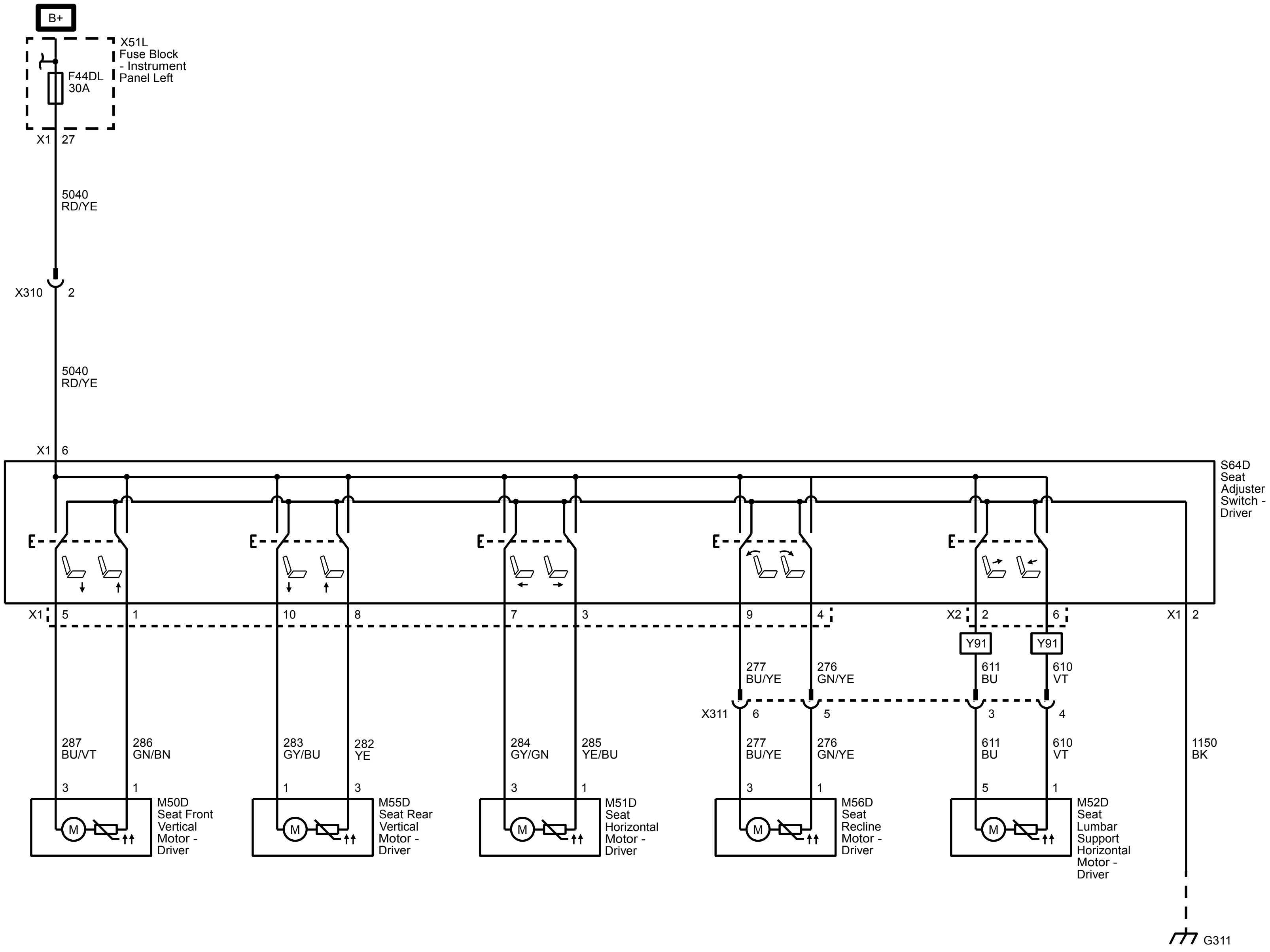

S64D
Seat
Adjuster
Switch -
Driver
L O C
D E S C
X1
6
1
5
8
10
3
7
4
9
X2
2
6
1
5
1150
BK
1518
GN/BN
1520
BU/VT
1519
YE
1521
YE/BU
1522
YE/BN
1523
GY/GN
1269
GY/BK
1270
GN
1065
YE
1064
BU/VT
1066
WH
1067
YE/BK
X5
9
10
19
20
7
8
21
22
14
15
16
17
K40D
Seat
Memory
Control
Module -
Driver
X3
4
3
6
5
12
11
1
2
10
9
7
8
287
BN/VT
286
GN/BN
283
GY/BU
282
YE
284
GY/GN
285
YE/BU
276
GN/YE
277
BU/YE
610
VT
611
BU
768
YE/BN
767
YE/BU
X311
5
6
4
3
2
1
276
GN/YE
277
BU/YE
610
VT
611
BU
768
YE/BN
767
YE/BU
3
1
M
M50D
Seat Front
Vertical
Motor -
Driver
1
3
M
M55D
Seat Rear
Vertical
Motor -
Driver
3
1
M
M51D
Seat
Horizontal
Motor -
Driver
1
3
M
M56D
Seat
Recline
Motor -
Driver
2
5
1
3
A90
Logic
M
A14D
Seat
Lumbar
Support
Pump -
Driver
G311

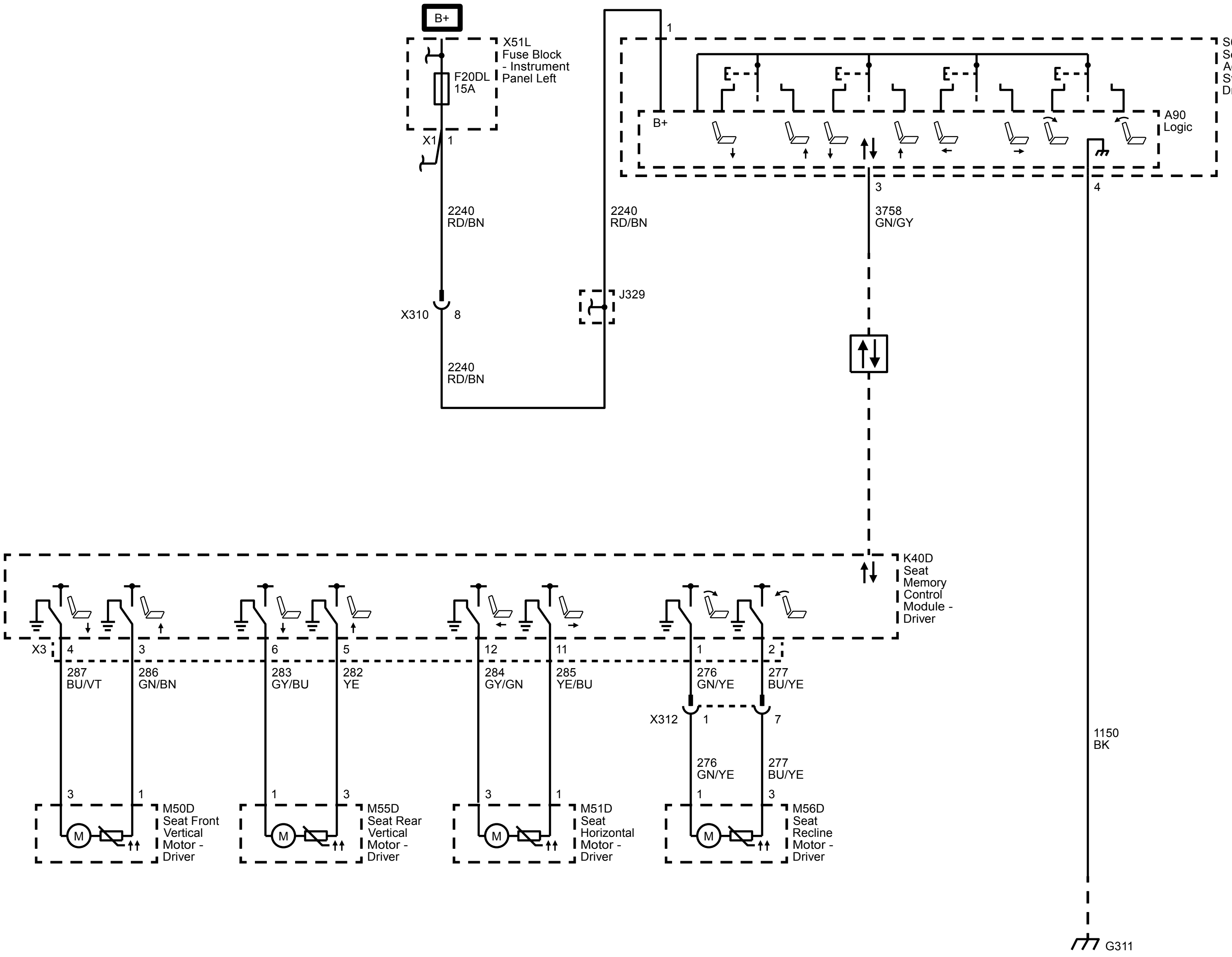
Position Sensors (A45)


K40D
Seat
Memory
Control
Module -
Driver
X5
1
12
25
11
26
5V
13
6
X6
4
3298
WH/RD
557
BN/WH
568
YE/BU
569
GN
570
WH/BK
JF4
JF4
JF4
6207
WH/RD
6206
BK/GY
5952
BU
X312
11
570
WH/BK
Adjustable
Pedal
Schematics
4
M50D
Seat Front
Vertical
Motor -
Driver
2
4
M55D
Seat Rear
Vertical
Motor -
Driver
2
4
M51D
Seat
Horizontal
Motor -
Driver
2
4
M56D
Seat
Recline
Motor -
Driver
2
3298
WH/RD
X312
12
3298
WH/RD
3298
WH/RD
3298
WH/RD
3298
WH/RD
3298
WH/RD
J315

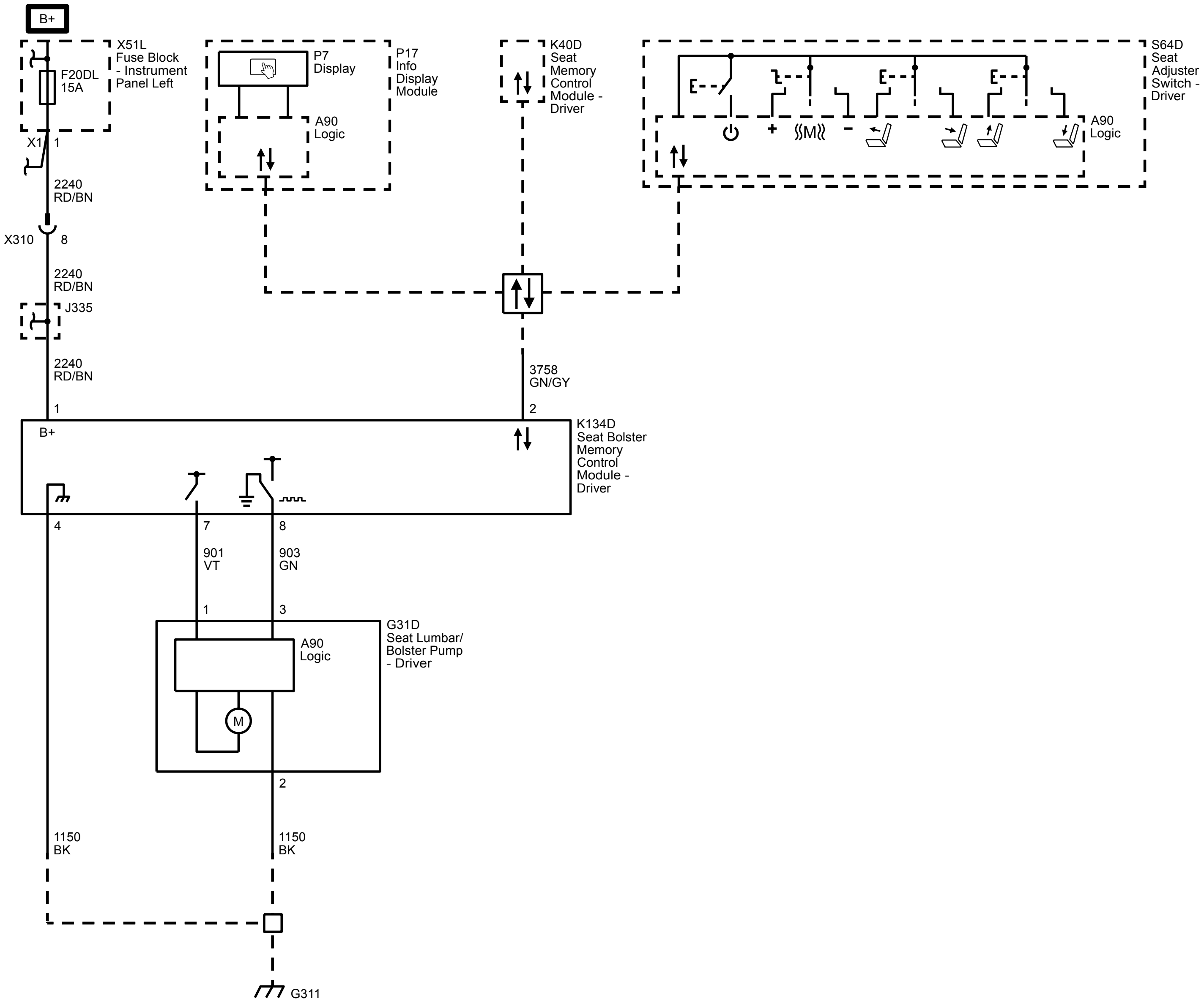
Power Seat (without A45)

LOC
DESC


B+
X51L
Fuse Block
- Instrument
Panel Left
F44DL
30A
X1
27
5040
RD/YE
X310
2
5040
RD/YE
X1
6
S64D
Seat
Adjuster
Switch -
Driver
X1
5
1
10
8
7
3
9
4
X2
2
6
X1
2
Y91
Y91
277
BU/YE
276
GN/YE
611
BU
610
VT
X311
6
5
3
4
287
BU/VT
286
GN/BN
283
GY/BU
282
YE
284
GY/GN
285
YE/BU
277
BU/YE
276
GN/YE
611
BU
610
VT
1150
BK
3
1
1
3
3
1
3
1
5
1
M
M
M
M
M
M50D
Seat Front
Vertical
Motor -
Driver
M55D
Seat Rear
Vertical
Motor -
Driver
M51D
Seat
Horizontal
Motor -
Driver
M56D
Seat
Recline
Motor -
Driver
M52D
Seat
Lumbar
Support
Horizontal
Motor -
Driver
G311

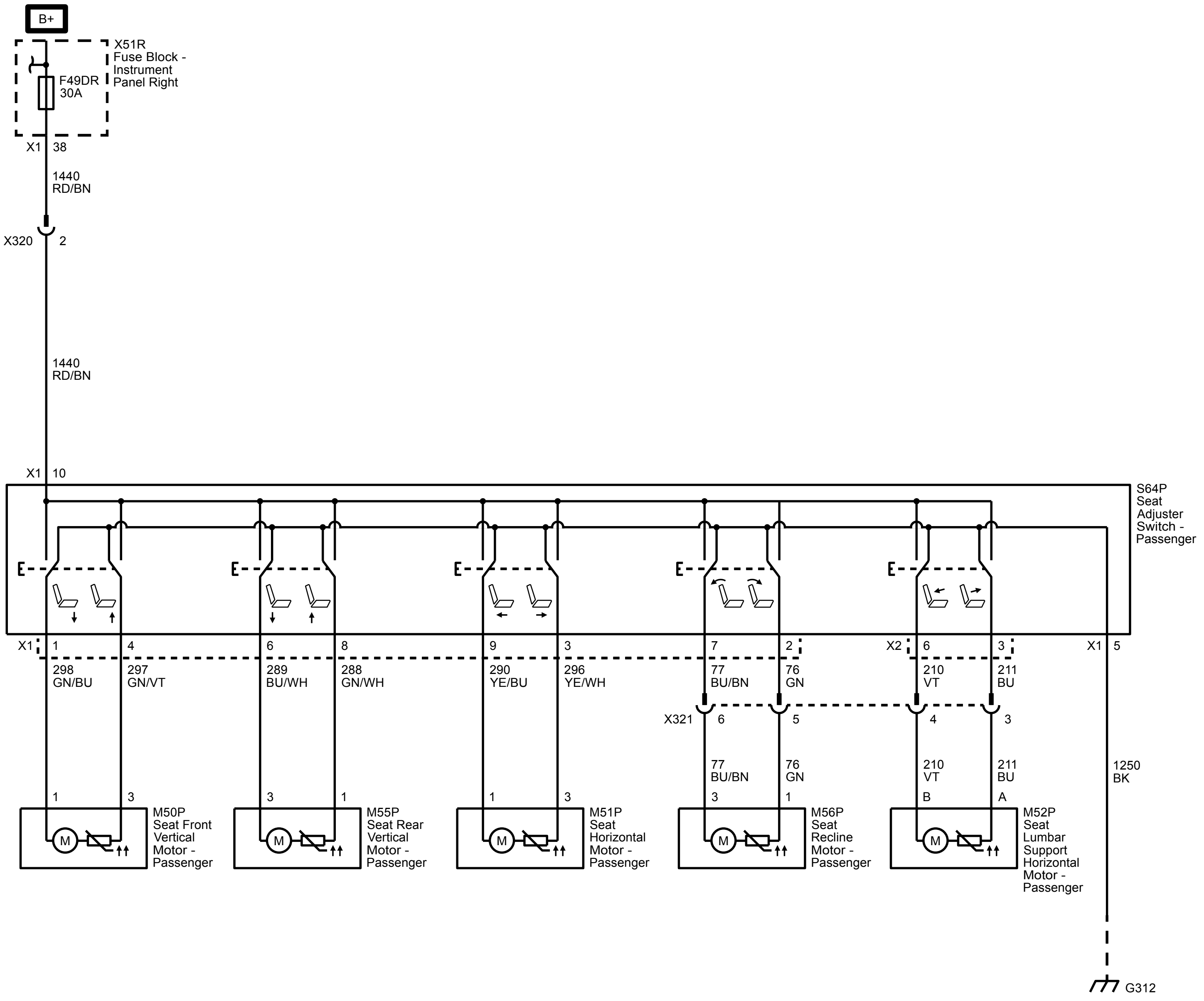

B+
X51L
Fuse Block
- Instrument
Panel Left
F20DL
15A
X1 1
2240
RD/BN
X310 8
2240
RD/BN
2240
RD/BN
J329
1
S64D
Seat
Adjuster
Switch -
Driver
B+
A90
Logic
3
3758
GN/GY
4
K40D
Seat
Memory
Control
Module -
Driver
X3
4
287
BU/VT
3
286
GN/BN
6
283
GY/BU
5
282
YE
12
284
GY/GN
11
285
YE/BU
1
276
GN/YE
2
277
BU/YE
X312 1
7
276
GN/YE
277
BU/YE
1150
BK
3
1
M50D
Seat Front
Vertical
Motor -
Driver
1
3
M55D
Seat Rear
Vertical
Motor -
Driver
3
1
M51D
Seat
Horizontal
Motor -
Driver
1
3
M56D
Seat
Recline
Motor -
Driver
M
M
M
M
G311

Lumbar and Massage (ULT)

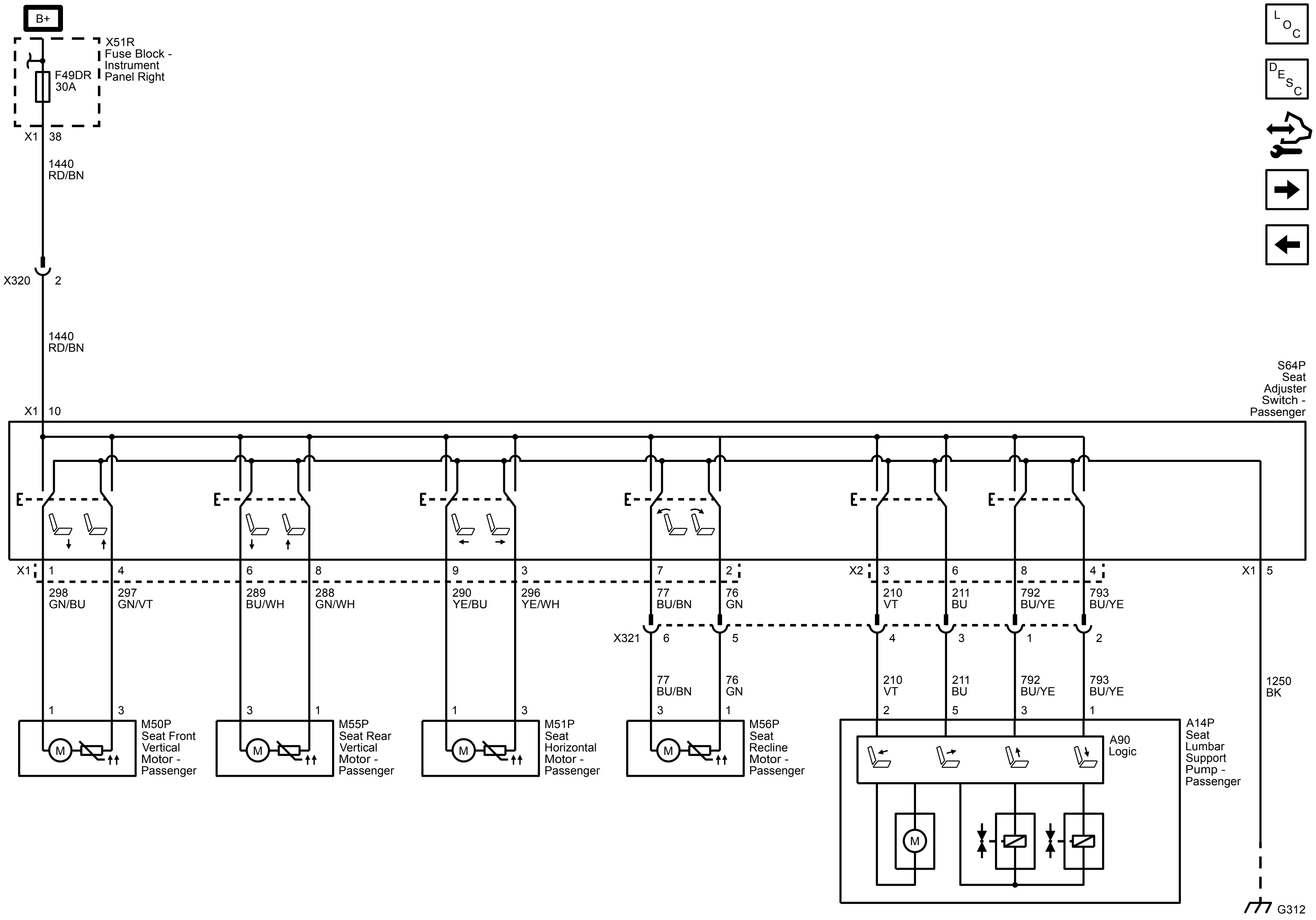

B+
X51L
Fuse Block
- Instrument
Panel Left
F20DL
15A
X1
1
2240
RD/BN
X310
8
2240
RD/BN
J335
2240
RD/BN
1
P7
Display
P17
Info
Display
Module
A90
Logic
K40D
Seat
Memory
Control
Module -
Driver
S64D
Seat
Adjuster
Switch -
Driver
A90
Logic
+
M
–
3758
GN/GY
2
B+
K134D
Seat Bolster
Memory
Control
Module -
Driver
4
7
8
901
VT
903
GN
1
3
G31D
Seat Lumbar/
Bolster Pump
- Driver
A90
Logic
M
2
1150
BK
1150
BK
G311

Passenger Seat Schematics

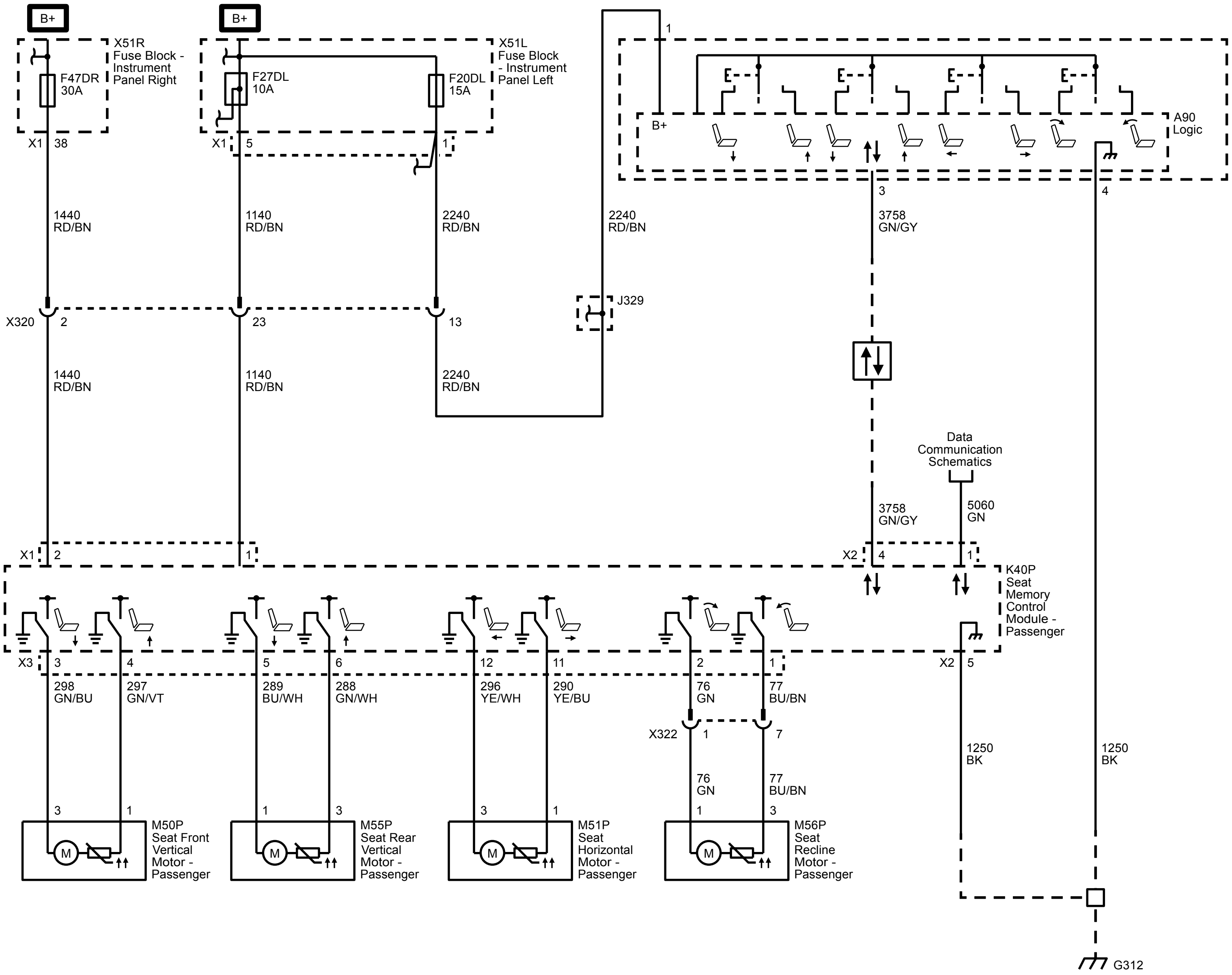
Power Seat (without Y91 or Z75)


B+
X51R
Fuse Block -
Instrument
Panel Right
F49DR
30A
X1 38
1440
RD/BN
X320 2
1440
RD/BN
X1 10
S64P
Seat
Adjuster
Switch -
Passenger
X1 1
4
6
8
9
3
7
2
X2 6
3
X1 5
298
GN/BU
297
GN/VT
289
BU/WH
288
GN/WH
290
YE/BU
296
YE/WH
77
BU/BN
76
GN
210
VT
211
BU
X321 6
5
4
3
77
BU/BN
76
GN
210
VT
211
BU
1250
BK
1
3
3
1
1
3
3
1
B
A
M
M
M
M
M
M50P
Seat Front
Vertical
Motor -
Passenger
M55P
Seat Rear
Vertical
Motor -
Passenger
M51P
Seat
Horizontal
Motor -
Passenger
M56P
Seat
Recline
Motor -
Passenger
M52P
Seat
Lumbar
Support
Horizontal
Motor -
Passenger
G312

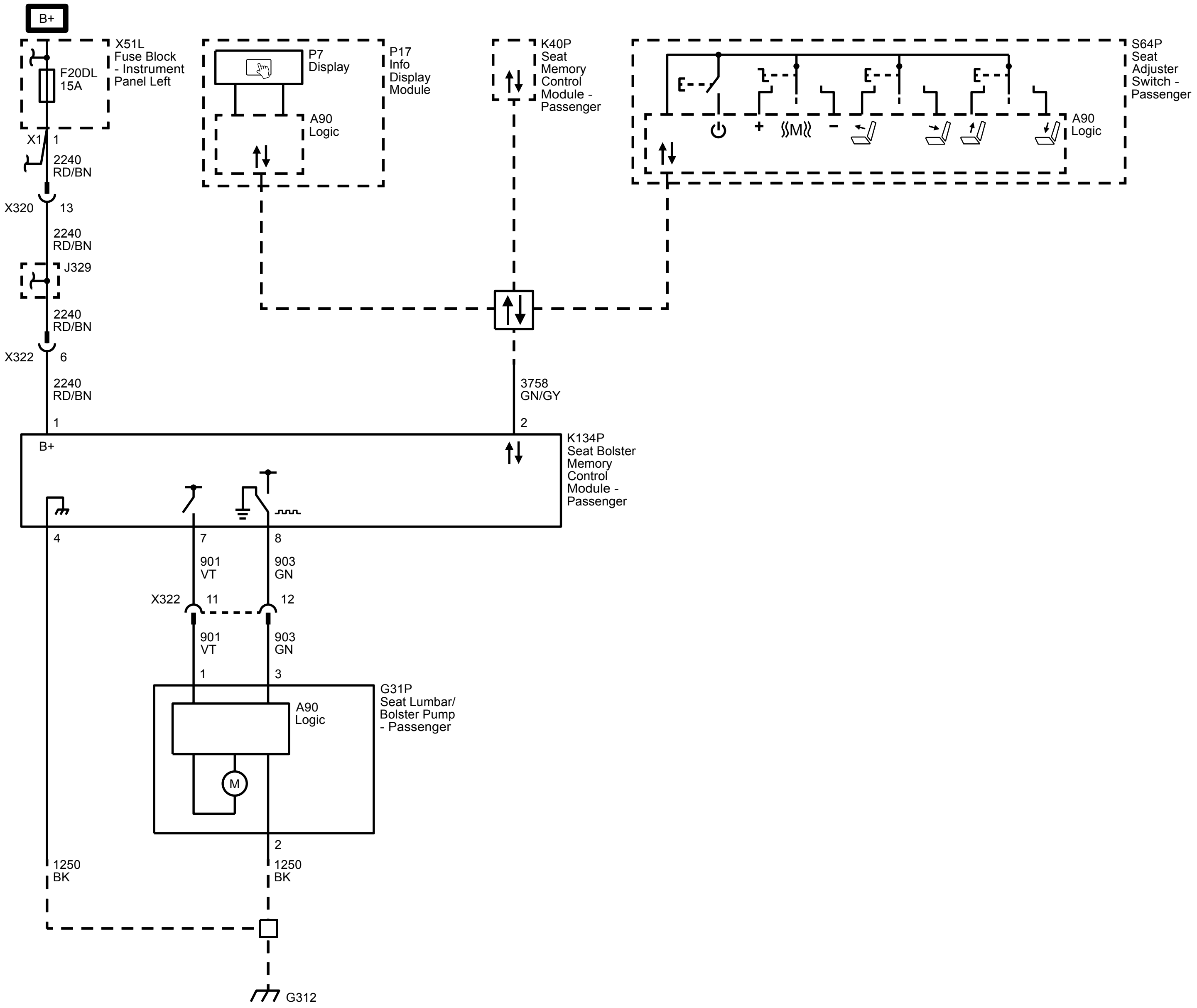
Power Seat (Y91 or Z75 without ULT)


B+
X51R
Fuse Block -
Instrument
Panel Right
F49DR
30A
X1
38
1440
RD/BN
X320
2
1440
RD/BN
X1
10
S64P
Seat
Adjuster
Switch -
Passenger
X1
1
4
6
8
9
3
7
2
X2
3
6
8
4
X1
5
298
GN/BU
297
GN/VT
289
BU/WH
288
GN/WH
290
YE/BU
296
YE/WH
77
BU/BN
76
GN
210
VT
211
BU
792
BU/YE
793
BU/YE
X321
6
5
4
3
1
2
77
BU/BN
76
GN
210
VT
211
BU
792
BU/YE
793
BU/YE
1250
BK
1
3
3
1
1
3
3
1
2
5
3
1
M
M
M
M
M
M50P
Seat Front
Vertical
Motor -
Passenger
M55P
Seat Rear
Vertical
Motor -
Passenger
M51P
Seat
Horizontal
Motor -
Passenger
M56P
Seat
Recline
Motor -
Passenger
A90
Logic
A14P
Seat
Lumbar
Support
Pump -
Passenger
G312
L O C
D E S C

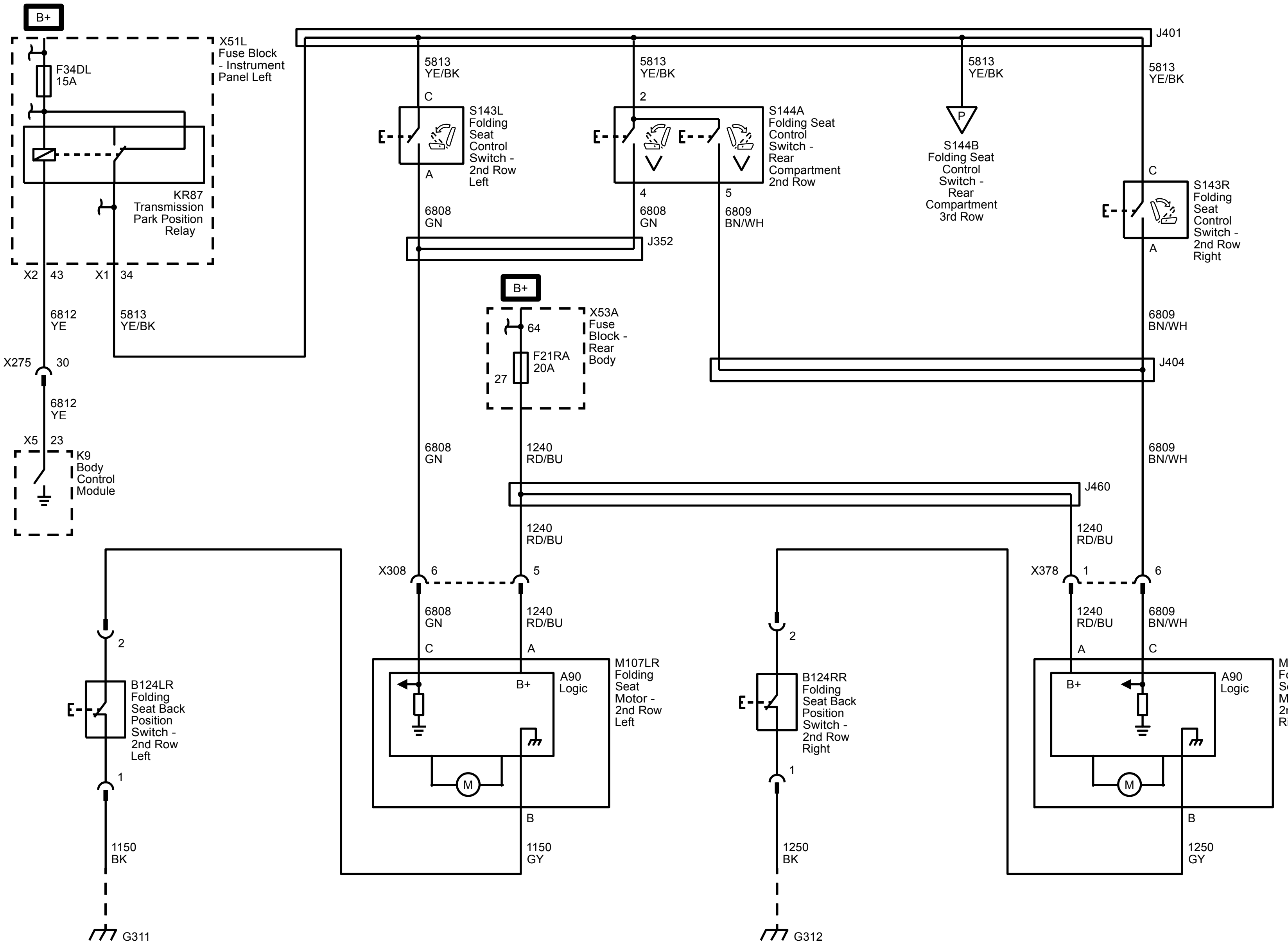
Power Seat (ULT)


B+
X51R
Fuse Block - Instrument Panel Right
F47DR
30A
X1 38
B+
X51L
Fuse Block - Instrument Panel Left
F27DL
10A
F20DL
15A
X1 5
1
1440
RD/BN
1140
RD/BN
2240
RD/BN
2240
RD/BN
1
S64P
Seat Adjuster Switch - Passenger
B+
A90
Logic
3
3758
GN/GY
4
X320
2
23
13
J329
1440
RD/BN
1140
RD/BN
2240
RD/BN
Data Communication Schematics
3758
GN/GY
5060
GN
X1 2
1
X2 4
1
K40P
Seat Memory Control Module - Passenger
X3 3
4
5
6
12
11
2
1
X2 5
298
GN/BU
297
GN/VT
289
BU/WH
288
GN/WH
296
YE/WH
290
YE/BU
76
GN
77
BU/BN
X322
1
7
76
GN
77
BU/BN
1250
BK
1250
BK
3
1
M50P
Seat Front Vertical Motor - Passenger
1
3
M55P
Seat Rear Vertical Motor - Passenger
3
1
M51P
Seat Horizontal Motor - Passenger
1
3
M56P
Seat Recline Motor - Passenger
M
M
M
M
G312

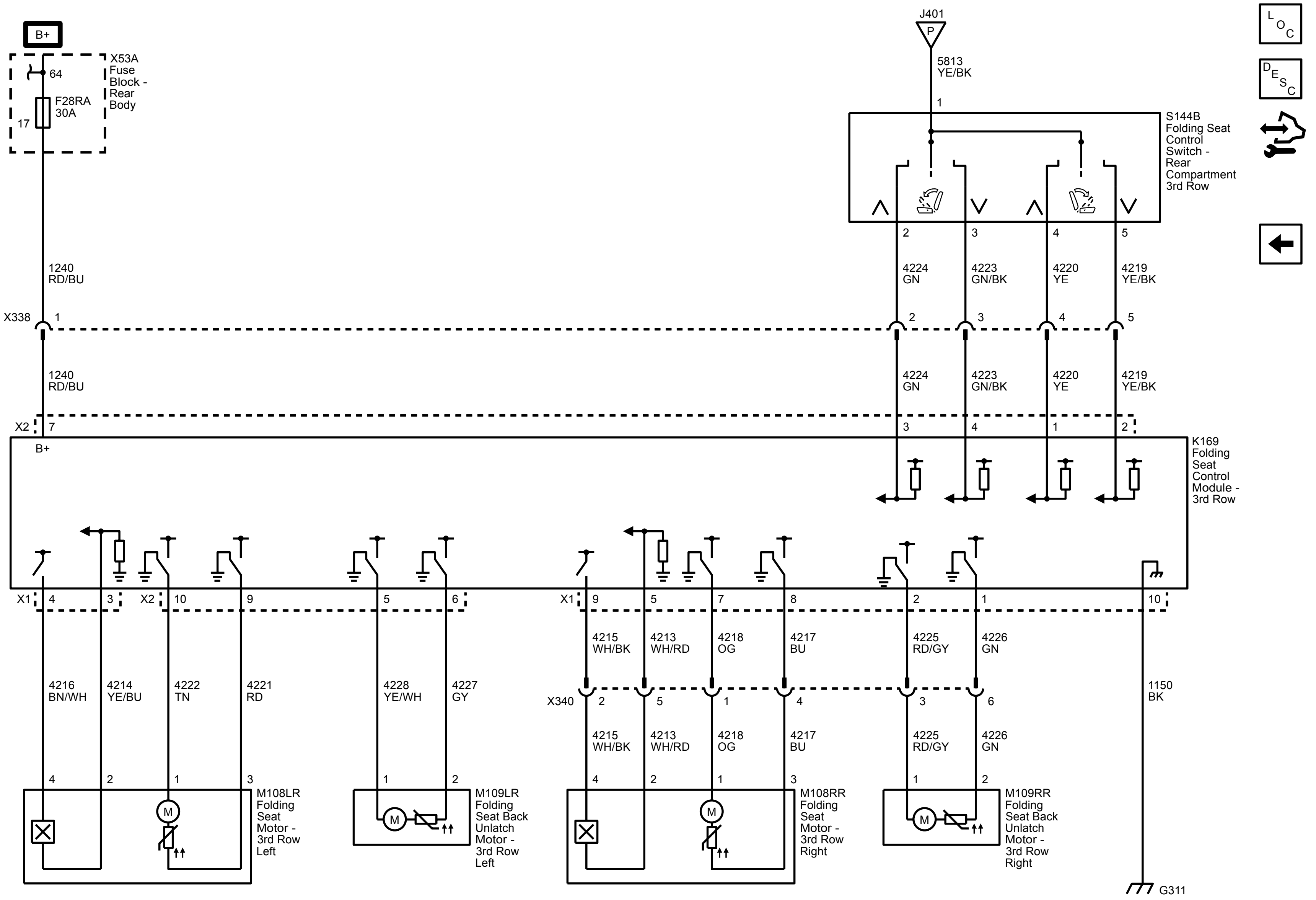
Lumbar and Massage (ULT)


B+
X51L
Fuse Block
- Instrument
Panel Left
F20DL
15A
X1
1
2240
RD/BN
X320
13
2240
RD/BN
J329
2240
RD/BN
X322
6
2240
RD/BN
1
B+
P7
Display
P17
Info
Display
Module
A90
Logic
K40P
Seat
Memory
Control
Module -
Passenger
S64P
Seat
Adjuster
Switch -
Passenger
A90
Logic
+
M
-
3758
GN/GY
2
K134P
Seat Bolster
Memory
Control
Module -
Passenger
4
7
8
901
VT
903
GN
X322
11
12
901
VT
903
GN
1
3
G31P
Seat Lumbar/
Bolster Pump
- Passenger
A90
Logic
M
2
1250
BK
1250
BK
G312

2nd Row Seats (ATN or ATT)


B+
X51L Fuse Block - Instrument Panel Left
F34DL 15A
KR87 Transmission Park Position Relay
X2 43
X1 34
6812 YE
5813 YE/BK
X275 30
6812 YE
X5 23
K9 Body Control Module
J401
5813 YE/BK
C
S143L Folding Seat Control Switch - 2nd Row Left
A
6808 GN
5813 YE/BK
2
S144A Folding Seat Control Switch - Rear Compartment 2nd Row
4
5
6808 GN
6809 BN/WH
J352
5813 YE/BK
P
S144B Folding Seat Control Switch - Rear Compartment 3rd Row
5813 YE/BK
C
S143R Folding Seat Control Switch - 2nd Row Right
A
6809 BN/WH
J404
B+
X53A Fuse Block - Rear Body
64
F21RA 20A
27
6808 GN
1240 RD/BU
6809 BN/WH
J460
1240 RD/BU
1240 RD/BU
X308 6
5
X378 1
6
6808 GN
1240 RD/BU
1240 RD/BU
6809 BN/WH
C
A
A
C
M107LR Folding Seat Motor - 2nd Row Left
A90 Logic
B+
M
B
1150 GY
2
B124LR Folding Seat Back Position Switch - 2nd Row Left
1
1150 BK
G311
2
B124RR Folding Seat Back Position Switch - 2nd Row Right
1
1250 BK
G312
M107RR Folding Seat Motor - 2nd Row Right
A90 Logic
B+
M
B
1250 GY

3rd Row Seats (AS8)


B+
X53A
Fuse
Block -
Rear
Body
64
F28RA
30A
17
J401
P
5813
YE/BK
1
S144B
Folding Seat
Control
Switch -
Rear
Compartment
3rd Row
L
O
C
D
E
S
C
2
3
4
5
4224
GN
4223
GN/BK
4220
YE
4219
YE/BK
1240
RD/BU
X338
1
2
3
4
5
4224
GN
4223
GN/BK
4220
YE
4219
YE/BK
1240
RD/BU
X2
7
3
4
1
2
B+
K169
Folding
Seat
Control
Module -
3rd Row
X1
4
3
X2
10
9
5
6
X1
9
5
7
8
2
1
10
4215
WH/BK
4213
WH/RD
4218
OG
4217
BU
4225
RD/GY
4226
GN
4216
BN/WH
4214
YE/BU
4222
TN
4221
RD
4228
YE/WH
4227
GY
1150
BK
X340
2
5
1
4
3
6
4215
WH/BK
4213
WH/RD
4218
OG
4217
BU
4225
RD/GY
4226
GN
4
2
1
3
M
M108LR
Folding
Seat
Motor -
3rd Row
Left
1
2
M
M109LR
Folding
Seat Back
Unlatch
Motor -
3rd Row
Left
4
2
1
3
M
M108RR
Folding
Seat
Motor -
3rd Row
Right
1
2
M
M109RR
Folding
Seat Back
Unlatch
Motor -
3rd Row
Right
G311

Description and Operation

Lumbar Support Description and Operation (2-Way with Memory A45)

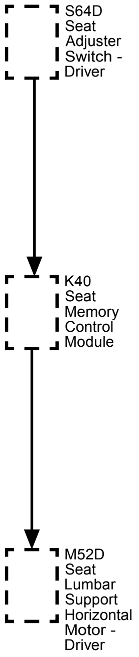
Lumbar Support Components

The driver seat lumbar support system with memory (A45) consists of the following components:

- Seat adjuster switch
- Seat memory control module
- Seat lumbar support horizontal motor

Lumbar Circuit Description

Lumbar Block Diagram


S64D Seat Adjuster Switch - Driver
K40 Seat Memory Control Module
M52D Seat Lumbar Support Horizontal Motor - Driver

Ground is supplied at all times to the driver seat adjuster switch through the switch ground circuit and ground connection. The seat memory control module supplies a low current voltage to each signal circuit of the seat lumbar support switch. When the seat switches are pressed, the appropriate signal circuit from the seat memory control module is pulled low through the switch contacts indicating the lumbar command. In response to this signal, the seat memory control module applies battery voltage through the driver seat lumbar motor forward control circuit and ground through the driver seat lumbar motor rearward control circuit to the motor. The motor runs to drive the lumbar support forward towards the occupants back until the switch is released. Moving the lumbar support rearward works similarly to moving the lumbar support forward, except that battery positive voltage and ground are applied on the opposite

Lumbar Support Description and Operation (2-Way without Memory A45)

Lumbar Support Components

The power seat lumbar support systems consist of the following components:

- Seat lumbar switch
- Lumbar support motor

The seat lumbar switch provides both power and ground to the lumbar support motor. The motor contains an electronic circuit breaker (PTC) that will reset only after voltage has been removed from the motor. The motor moves the lumbar support forward and rearward.

When the lumbar switch is operated to move the lumbar support rearward, battery positive voltage is applied through the lumbar rearward switch contacts and the lumbar motor rearward control circuit to the lumbar support motor. The motor is grounded through the lumbar forward switch contacts and the lumbar motor forward control circuit to the motor. The motor runs to drive the lumbar support rearward away from the occupant's back until the switch is released. Moving the lumbar support forward works similarly to moving the lumbar support rearward, except that battery positive voltage and ground are applied on opposite circuits causing the motor to run in the opposite direction.

Lumbar Support Description and Operation (4-Way without Memory A45)

Lumbar Support Components

The driver and front passenger pneumatic lumbar support system each consist of the following components:

- Seat Lumbar support switch
- Seat lumbar support valve assembly
- Seat lumbar support pump

Circuit Description

Battery voltage is supplied at all times to the seat adjuster switch through a 30 A fuse located in the instrument panel fuse block. When a lumbar switch is pressed to inflate the lumbar support, battery voltage is applied through the switch contacts and the inflate control circuit to the seat lumbar support valve assembly. In response to this signal, the lumbar support valve assembly energizes its internal inflate solenoid and applies battery voltage through the seat lumbar support pump control circuit to the pump. The pump runs to inflate the appropriate lumbar bladder until the switch is released. When the lumbar rearward switch is pressed to deflate the lumbar support, battery voltage is applied through the switch contacts and the deflate control circuit to the lumbar support valve assembly. The lumbar support valve assembly energizes its internal deflate solenoid and air is released from the bladder until the switch is released.

Description of Operation

The following describes the lumbar support operation and how the lumbar support valve assembly responds to each of the lumbar support switch inputs:

- When the lumbar support switch pressed in the FORWARD direction, the lumbar support valve assembly will command the lumbar support pump ON and the upper and lower lumbar support bladders should inflate until the bladders are 100% inflated or the switch is released.
- When pressing the lumbar support switch in the REARWARD direction, the lumbar support valve assembly will slowly deflate the upper and lower lumbar support bladders until the switch is released or both bladders are 100% deflated.
- When the lumbar support switch is pressed in the UP direction, the lumbar support valve assembly will slowly inflate the upper lumbar support bladder until the switch is released or the bladder is 100% inflated.
- When the lumbar support switch is pressed in the DOWN direction, the lumbar support valve assembly will slowly deflate the upper lumbar bladder while it inflates the lower lumbar bladder. The lumbar support valve assembly will continue this operation until the switch is released or the upper lumbar bladder is 100% deflated and the lower lumbar bladder is 100% inflated.

Lumbar Support Description and Operation (4-Way with Memory A45)

The driver seat lumbar support system consists of the following components:

- Seat adjuster switch
- Seat memory control module
- Seat lumbar support valve assembly
- Seat lumbar pump

This driver seat lumbar support system is a non-memory 4-way pneumatic lumbar system controlled by the seat memory control module.

Circuit Description

Ground is supplied at all times to the driver seat adjuster switch through the switch ground circuit and ground connection. The seat memory control module supplies a low current voltage to each signal circuit of the seat adjuster switch. When the lumbar switch is pressed in the forward direction to inflate the seat lumbar support, the seat horizontal forward signal circuit from the seat memory control module is pulled low through the switch contacts indicating the seat lumbar command. The seat memory control module then applies battery voltage through the lumbar horizontal forward control circuit and ground through the lumbar horizontal rearward control circuit to the seat lumbar support valve assembly. The valve assembly energizes its internal inflate solenoid and applies battery voltage through the seat lumbar support pump control circuit to the pump. The pump runs to inflate the appropriate lumbar bladder until the switch is released. When the lumbar switch is pressed in the rearward direction, the lumbar support deflate signal circuit from the seat memory control module is pulled low indicating the lumbar deflate command. The seat memory control module then applies battery voltage through the lumbar horizontal rearward control circuit and ground through the lumbar horizontal forward control circuit to the seat lumbar support valve assembly. The valve assembly energizes its internal deflate solenoid and air is released from the lumbar bladders until the switch is released.

Description of Operation

The following describes the lumbar support operation and how the lumbar adjuster valve assembly responds to each of the lumbar support switch inputs:

- When the lumbar support switch pressed in the FORWARD direction, the lumbar adjuster valve assembly will command the lumbar support pump ON and the upper and lower lumbar support bladders should inflate until the bladders are 100% inflated or the switch is released.
- When pressing the lumbar support switch in the REARWARD direction, the lumbar adjuster valve assembly will slowly deflate the upper and lower lumbar support bladders until the switch is released or both bladders are 100% deflated.
- When the lumbar support switch is pressed in the UP direction, the lumbar adjuster valve assembly will slowly inflate the upper lumbar support bladder until the switch is released or the bladder is 100% inflated.
- When the lumbar support switch is pressed in the DOWN direction, the lumbar adjuster valve assembly will slowly deflate the upper lumbar bladder while it inflates the lower lumbar bladder. The lumbar adjuster valve assembly will continue this operation until the switch is released or the upper lumbar bladder is 100% deflated and the lower lumbar bladder is 100% inflated.

Lumbar Support Description and Operation (With Seat Bolster Memory Control Module)

The memory lumbar/bolster system uses air bladders to adjust various aspects of the seat configuration to meet an occupant's preference. It also allows these adjustments to be stored to a memory position along with the seat position data.

Some vehicles may also be equipped with dynamic mode control which gives the chassis subsystem the ability to request an automatic adjustment to the seat's bolster support depending on vehicle driving conditions.

The various seat adjustments and functionality which may be possible include:

- Lumbar support – forward and rearward
- Lumbar support – up and down
- Seat back side bolster
- Upper shoulder support
- Back massage functionality

The components of the system include:

- LIN based seat switch
- Bolster memory control module
- Radio
- Information display
- Seat memory control module
- Seat air pump motor
- Air bladders

LIN Seat Switch

The seat switch communicates all customer requests for seat movement or adjustment via the LIN serial data bus to the seat memory control module. The seat switch may consist of the following controls:

- Seat adjuster switch similar to the typical discrete seat switch
- Massage On/Off switch, if massage is equipped
- 4-way multi-function switch which can be activated Up/Down/Forward/Rearward
- Feature select rotary ring around the outside of the 4-way multi-function Switch

Manipulating the seat cushion and seat back control bar results in the seat memory control module responding in the same way as it would if the resultant requests were made by discrete signals instead of the LIN messaging this switch employs.

Information Feature Display

Due to the number of pneumatic lumbar/bolster features available, and that the 4-way multi-function switch controls different operations depending on feature selection, the information display is used for the visual feedback of the feature selected as well as which operations of the feature are under the control of the 4-way multi-function switch.

The seat memory control module will track and maintain which lumbar/bolster features are available on the vehicle as well as the current feature selection and its settings. This information is communicated via GMLAN to the radio tuner which in turn communicates it to the information interface for display. The display will show a seat image with the specific selected feature highlighted. In addition, arrows and text will indicate the functions to be adjusted by the 4-way multi-function switch.

If the seat selection menu is not showing on the display, adjusting the lumbar/bolster seat switches will bring this menu up. Only when the display is active and the various features are displayed by the infotainment system, then customer can then use the rotary ring to move up or down the feature menu. The display will show a seat image with the specific selected feature highlighted along with arrows and text to indicate the functions to be adjusted by the 4-way multi-function switch.

Lumbar/Bolster Operation

Once the lumbar/bolster feature has been selected, the seat memory control module will command the seat bolster memory control module to perform the required pneumatic movements via LIN serial data messages.

The seat bolster memory control module contains the electronic circuitry for executing the commanded pneumatic seat adjustments, air direction solenoids, pressure sensors for storing air bladder pressures, and an output which supplies battery power to the external seat air pump motor when any of the air bladders require inflating.

Based on the LIN command from the seat memory control module, the seat bolster memory control module controls the appropriate air solenoids and activates or deactivates the external air pump in order to inflate or deflate the air bladders in the correct combination. When an air bladder needs inflating its solenoid opens and the pump motor is activated pumping air into the bladder. When an air bladder needs deflating its solenoid opens the release valve and air is allowed to bleed out of the bladder into the vehicle cabin.

To support memory recall and massage, the seat bolster memory control module uses internal air pressure sensors to track, store and recall the positions of all the air bladders under its control.

The massage On/Off switch on the LIN seat switch allows the customer to turn the massage feature on and off without having to go back into the seat feature menu for set-up.

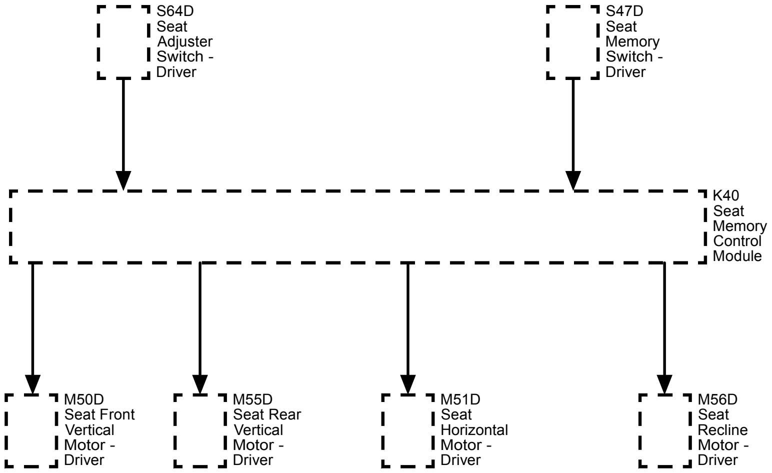
Refer to Seat Adjustment in the Owner's Manual for the up level seat adjustment features listed above.

Memory Seats Description and Operation

The driver memory seat system consists of the following components:

- Seat adjuster switch
- Seat memory switch
- Seat memory control module
- Seat horizontal motor
- Seat front vertical motor
- Seat rear vertical motor
- Seat recline motor
- Seat horizontal motor position sensor
- Seat front vertical motor position sensor
- Seat rear vertical motor position sensor
- Seat recline motor position sensor

Memory Seat Block Diagram


S64D Seat Adjuster Switch - Driver
S47D Seat Memory Switch - Driver
K40 Seat Memory Control Module
M50D Seat Front Vertical Motor - Driver
M55D Seat Rear Vertical Motor - Driver
M51D Seat Horizontal Motor - Driver
M56D Seat Recline Motor - Driver

Driver Seat Adjuster Switch

For vehicles equipped with the Seat Bolster Memory Control Module feature (AQJ), refer to Lumbar Support Description and Operation (2-Way with Memory A45)Lumbar Support Description and Operation (2-Way without Memory A45)Lumbar Support Description and Operation (4-Way without Memory A45)Lumbar Support Description and Operation (4-Way with Memory A45)Lumbar Support Description and Operation (With Seat Bolster Memory Control Module) for the seat adjuster switch description and operation.

Ground is supplied at all times to the driver seat adjuster switch through the switch ground circuit and ground connection. The seat memory control module supplies a low current voltage to each signal circuit of the seat adjuster switch. When the driver seat adjuster switches are pressed, the appropriate signal circuit from the seat memory control module is pulled low through the switch contacts indicating the power seat command. The seat memory control module then commands the appropriate driver seat motor to move in response to the switch signal.

Seat Memory Control Module Power and Grounds

Battery voltage is supplied at all times to the seat memory control module through two different circuits. One circuit is used by the module to apply power to the driver seat motors and lumbar motors, if equipped, when commanded ON. The second battery voltage circuit is used to power up module and supply a reference voltage to the seat position sensors. Ground is provided to the seat memory control module through a single ground circuit and ground connection.

Seat Motors

There are 4 motors that move the position of the seat. These are the seat horizontal motor, seat front vertical motor, seat rear vertical motor, and the seat back recline motor. The horizontal motor moves the entire seat forward and rearward. The seat front vertical motor moves the front of the seat cushion up or down. The seat rear vertical motor moves the rear of the seat cushion up and down. Due to the seat adjuster switch design the front tilt and the seat height adjuster motor cannot be operated at the same time The recline motor moves the angle of the seat back forward or rearward.

The seat memory control module controls all seat and lumbar motors via half bridges that are connected to a single power rail internal to the module. The module connects all seat and lumbar motor outputs to a common ground whenever they are not in operation. The seat memory control module checks to see if any motor control circuits are shorted to ground or voltage before enabling any seat or lumbar motor. All of the motors operate independently of each other. Each motor contains a electronic circuit breaker (PTC), which will reset only after voltage has been removed from the motor.

All seat motors are reversible. For example, when a seat switch is pressed to move the entire seat forward, ground is applied through the switch contacts onto the seat horizontal forward switch signal circuit to the seat memory control module. In response to this signal, the module applies battery voltage through the driver seat horizontal motor forward control circuit and ground through the driver seat horizontal motor rearward control circuit to the motor. The motor runs in order to drive the entire seat forward. Moving the entire seat rearward works similarly to moving the entire seat forward, except that battery voltage and ground are applied on the opposite circuits causing the motor to run in the opposite direction. All of the motors are powered this way.

Position Sensors

To monitor seat position, each seat motor has an internal 2-wire hall-effect position sensor. The seat memory control module supplies all the sensors with a common 12 V reference when the seat is moving and a unique signal circuit for each sensor. During seat motor operation, the position sensors provide a specific number of pulse signals for every revolution of the motor shaft.

The seat memory control module determines seat position by keeping a running counter where movement in the forward/upward direction adds counts and movement in the rearward/down direction subtracts counts. The value of the counter will be in the range of 0 – 65,535

The value of these counters, which represent seat positions, are stored in memory for future seat memory recall operation. During a memory seat position recall, the seat memory control module moves the seat in such a way to return it the stored counter value.

Memory Functions

In all power modes except crank, memory recalls can be initiated by pressing and holding one of the memory position buttons until the seat reaches the stored memory position associated with the activated button. This is called a supervised recall.

The seat memory control module supplies a ground at all times through a low reference circuit to the driver seat memory switch. The module also supplies memory set and memory recall signal circuits to the seat memory switch. When a memory recall switch is pressed, the signal circuit from the seat memory control module is pulled low through the switch contacts and a series of resistors indicating the memory recall request. In response to this signal, the seat memory control module commands the appropriate seat motors to move to the pre-recorded seat positions stored in memory.

Refer to the Owner’s Manual for storing memory positions.

Auto Memory Recall and Easy Exit

The seat memory control module will not perform Auto Memory Seat Recall and Easy Exit functions unless these options are enabled in vehicle personalization using the radio/HVAC controls.

Refer to Instruments and Controls/Vehicle Personalization in the Owner’s Manual for the following memory personalization options:

- Auto Memory Recall
- Easy Exit Options

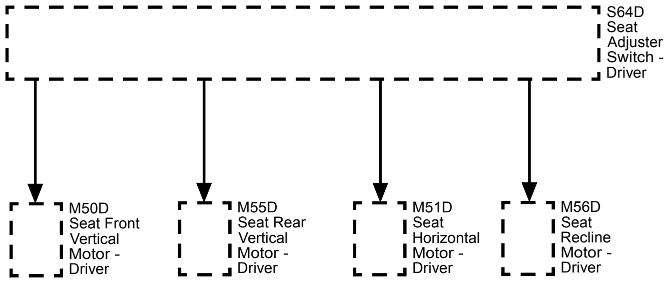
The radio/HVAC controls reports the auto memory recall option settings to the seat memory control module via serial data message. The module will then store the memory recall option setting and examine it before making a memory seat adjustment. The auto memory recall option setting stored within the module will not change until the auto memory recall option setting in vehicle personalization is changed.

Power Seats System Description and Operation (Front Seats)

The driver and passenger power seat systems each consist of the following components:

- Seat adjuster switch
- Seat horizontal motor
- Seat front vertical motor (If Equipped)
- Seat rear vertical motor
- Seat recline motor

Power Seat Block Diagram


S64D Seat Adjuster Switch - Driver
M50D Seat Front Vertical Motor - Driver
M55D Seat Rear Vertical Motor - Driver
M51D Seat Horizontal Motor - Driver
M56D Seat Recline Motor - Driver

Seat Motors

The seat switches provide both power and ground to the selected seat motors.

All of the seat motors operate independently of each other. Each motor contains an electronic circuit breaker (PTC) that opens in the event of a circuit overload and will reset only after voltage has been removed from the circuit. There are four seat position motors and two lumbar motors. These are the horizontal motor, front vertical motor, rear vertical motor, and the seat back recline motor. The seat horizontal motor moves the entire seat forward and rearward. The seat vertical motors may operate independently to tilt the front or rear of the seat cushion up or down. Both motors can also run simultaneously to move the entire seat up or down. The recline motor moves the angle of the seat back forward or rearward.

Seat Operation

All seat motors are reversible. For example, when the seat horizontal forward switch is pressed to move the entire seat forward, battery voltage is applied through the switch contacts and the seat horizontal motor forward control circuit to the motor. With the horizontal motor rearward switch contacts closed to the switch ground circuit, the motor runs in order to drive the entire seat forward until the switch is released. Moving the entire seat rearward works similarly to moving the entire seat forward, except that battery voltage and ground are applied on opposite circuits causing the motor to run in the opposite direction. All seat motors are powered this way.

Power Seats System Description and Operation (2nd Row Seats)

The left and right 2nd row folding seat systems each consist of the following components:

- Folding seat switch
- Folding seat motor

The folding 2nd row seats are operated from the folding seat switches located on the driver side rear panel and on the trim panel in the rear cargo area. Battery voltage is supplied at all times to the folding seat switches through the park enable relay while in a de-energized state. Battery voltage is also supplied at all times to the folding seat motors through a 20 A fuse located in the rear body fuse block. When a folding seat switch is pressed, battery voltage is applied through the switch contacts and the control circuit to the folding seat motor. The motor runs to move the seat back to the folded position.

Power Seats System Description and Operation (3rd Row Seats)

The left and right 3rd row folding seat system each consist of the following components:

- Folding seat control module – 3rd row
- Folding seat switch – D-pillar 3rd row
- Folding seat motor – seat back release 3rd row
- Folding seat motor – 3rd row
- Folding seat sensor

Folding Seat Control Module – 3rd Row

The folding seat control module controls both sides of the 60/40 split 3rd row folding seat.

The folding seat control module will be in a low power sleep state until it detects the activation of one of the folding seat switches. It will remain in its normal operating awake mode and not return to its sleep mode until all its outputs have been off for 30 s and it has been determined that no switches are active.

Battery positive voltage is supplied at all times to the folding seat control module through a 30 A fuse located in the rear body fuse block. The module uses this voltage for both logic power and to power the seat motors and seat back release motors. Each folding seat motor and release motor is controlled by a relays internal to the folding seat control module and through two control circuits to each motor and release motor. The control module checks to see if the control circuits are shorted to ground or voltage before enabling folding seat operation.

Folding Seat Switches

The 3rd row folding seat switches are located on the D-pillar of the rear cargo area. Each side of the 60/40 split seat has a pair of fold and unfold normally open, high assertion, momentary switches designed to keep them from being simultaneously pressed.

When the transmission is in the park position, battery voltage is supplied to the folding seat switches through the normally closed contacts of the Park Enable Relay which is controlled by the BCM. When the transmission is not in the park position, the BCM energizes the relay opening the contacts and removing battery voltage from the switches. Thus folding seat operation is only available with the vehicle transmission in the park position.

Each switch contact is connected to an individual discrete input of the folding seat control module which provides a pull down to ground on these signal circuits. When a folding seat switch is pressed battery voltage is applied through the switch contacts and the signal circuit to the folding seat control module. The module then commands the folding seat to move in response to the switch signal.

Folding Seat Motor – Seat Back Release

The folding seat back release motor is a spring loaded device used to latch the seat back into its desired parked position or to unlatch the seat back for folding or unfolding seat operation. There are three modes of release motor control; retract, hold, and release. When the folding seat switch is pressed to fold the seat, the folding seat control module applies a PWM voltage, approximately 95% duty cycle, through the seat back release motor control circuit to the motor releasing the seat back. The control module holds the release motor at a reduced voltage, approximately 25% duty cycle, until a stall condition is reached. Once a stall condition is reach the module releases the motor latching the seat back in place. One second after the motor is released, the seat will move in the opposite direction of travel to confirm the seat back is locked in a secure position. This action will continue until a stall condition is detected, refer to Folding Seat Sensor below. After the completion of the latch lock conformation, the module will relieve any bound up tension after the latch lock conformation.

Folding Seat Motor

The folding seat motor is used to physically move the seat back to its desired position. It is a bi-directional motor connected to two H-Bridge relay outputs of the folding seat control module. To fold the seat, one control module output provides power to one side of the motor while the other side is grounded through the other relay output. To unfold the seat, the polarities on the motor are reversed.

While the motor outputs are off, the control module internal diagnostic network applies a bias voltage of 2.5 V to the motor control circuits. If there is a short to voltage or a short to ground on either control circuit, this will cause a shift in the bias voltage on the diagnostic network and the module will not activate a motor under this condition.

Folding Seat Sensor

Internal to the folding seat motor is the folding seat sensor. The sensor is a 2-wire hall-effect sensor which is used strictly to determine the stall status of the folding seat motor. It is not used to provide seat position information.

The folding seat control module supplies a 10 V reference voltage through one circuit while the other circuit is the signal circuit. As the motor runs the sensor provides 4 pulses per revolution which it uses to determine when the motor has reached a stalled condition. A stall condition is caused by the seat back being fully folded, by being unfolded in the upright position, or by an object in the seat's path preventing movement. If the module does not detect a pulse from the sensor for 100 ms it will cease the folding seat operation.

Folding Seat Operation

With the vehicle transmission in the park position, the folding seat will operate in either dual mode or single mode. The normal operating mode is the dual seat mode where both sides of the 60/40 seat can move individually or at the same time.

Single seat mode is entered during a requested operation when the system voltage drops below 10.5 V. It allows only one side of the 60/40 seat to be folded at a time until the requested operation is complete. Once the operation is completed, additional switch inputs will be ignored until the voltage level returns to its normal range. In all cases the 60 seat operation will have priority over the 40 seat operation.

When a switch is activated, battery voltage is applied to the associated input signal to the control module. This wakes the module up out of its low power state and begins to execute the requested seat movement.

First, the control module operates the folding seat back release motor in the pull state, refer to Folding Seat Motor – Seat Back Release above, until it considers the seat is unlatched as determined either monitoring motor current for a stall condition or a 1.5 s time-out. Once the seat is considered unlatched the control module maintains the release motor in the hold state to keep the latch pin disengaged from the seat.

Once the release motor is in the hold state, the control module powers the folding seat motor in the appropriate direction to fold or un-fold the seat based on which switch inputs are active. While the seat motor is active the control module monitors the folding seat sensor for a stall condition, switch inputs for a transition from the active to the inactive state, excessive motor current, and the time the motor is active.

The seat will continue to move until the control module determines that either the customer has released the switch, the folding seat sensor indicates that the folding seat motor is in a stall condition, excessive motor current is detected, or the current seat movement is taking an excessive amount of time to execute for the given system voltage and operating temperature. When any of these conditions are detected the control module turns off the seat motor, then releases the motor allowing the motor's spring to drive the latch pin back into the lock position. The control module then executes a seat parking operation.

To execute seat parking, one second after the release motor is released, the seat shall move in the opposite direction of travel to confirm the latch is locked. This seat movement will occur until a stall condition is detected or 400 ms have passed. Then to relieve any tension in the seat structure that may have occurred due to the latch confirmation, the seat will move in the opposite direction for a specified amount of travel or after 100 ms have passed.

The module will power down to its low power state when all the switches appear inactive and all the outputs have been inactive for 30 s.

Power Seats System Description and Operation (Passenger Seat with Seat Bolster Memory Control Module)

The passenger power seat motors controlled by a seat memory control module consists of the following components:

- Seat adjuster switch
- Seat memory control module
- Seat horizontal motor
- Seat front vertical motor
- Seat rear vertical motor
- Seat recline motor

Passenger Seat Adjuster Switch

The seat adjuster switch on vehicles equipped with the seat memory lumbar/bolster feature is a LIN Bus device. When a power seat switch is pressed, a serial data message is sent from the seat adjuster switch to the seat memory control module indicating the power seat command. The seat memory control module then commands the appropriate seat motor to move in response to the switch signal.

Seat Memory Control Module Power and Grounds

Battery voltage is supplied at all times to the passenger seat memory control module through a 30 A fuse located in the right instrument panel fuse block. This voltage is used by the module to apply power to the seat motors when commanded ON. Battery voltage is also supplied at all times to the seat memory control module through a 10 A fuse located in the left instrument panel fuse block. This voltage is used to power up module. Ground is provided to the seat memory control module through a single ground circuit and ground connection.

Seat Motors

There are 4 motors that move the position of the seat. These are the seat horizontal motor, seat front vertical motor, seat rear vertical motor, and the seat back recline motor. The horizontal motor moves the entire seat forward and rearward. The seat front vertical motor moves the front of the seat cushion up or down. The seat rear vertical motor moves the rear of the seat cushion up and down. Due to the seat adjuster switch design the front tilt and the seat height adjuster motor cannot be operated at the same time The recline motor moves the angle of the seat back forward or rearward.

The seat memory control module controls all seat motors via half bridges that are connected to a single power rail internal to the module. The module connects all seat motor outputs to a common ground whenever they are not in operation. The seat memory control module checks to see if any motor control circuits are shorted to ground or voltage before enabling any seat motor. All of the motors operate independently of each other. Each motor contains a electronic circuit breaker (PTC), which will reset only after voltage has been removed from the motor.

All seat motors are reversible. For example, when a seat switch is pressed to move the entire seat forward, ground is applied through the switch contacts onto the seat horizontal forward switch signal circuit to the seat memory control module. In response to this signal, the module applies battery voltage through the seat horizontal motor forward control circuit and ground through the seat horizontal motor rearward control circuit to the motor. The motor runs in order to drive the entire seat forward. Moving the entire seat rearward works similarly to moving the entire seat forward, except that battery voltage and ground are applied on the opposite circuits causing the motor to run in the opposite direction. All of the motors are powered this way.

Memory Functions

The passenger power seat system controlled by the seat memory control module does not support seat memory functions. Its purpose is to support the seat bolster memory control module.

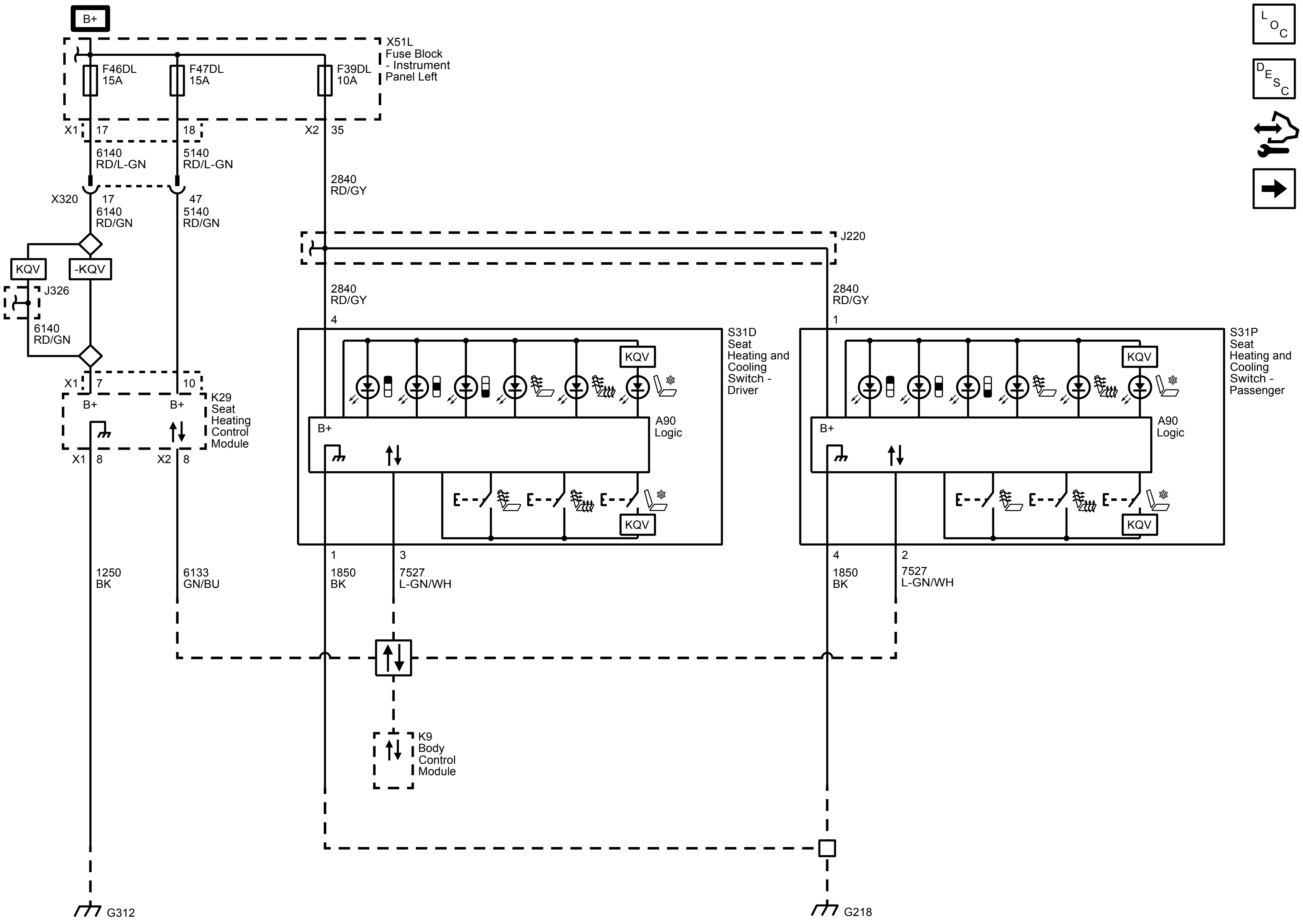
Seats

Seat Heating and Cooling

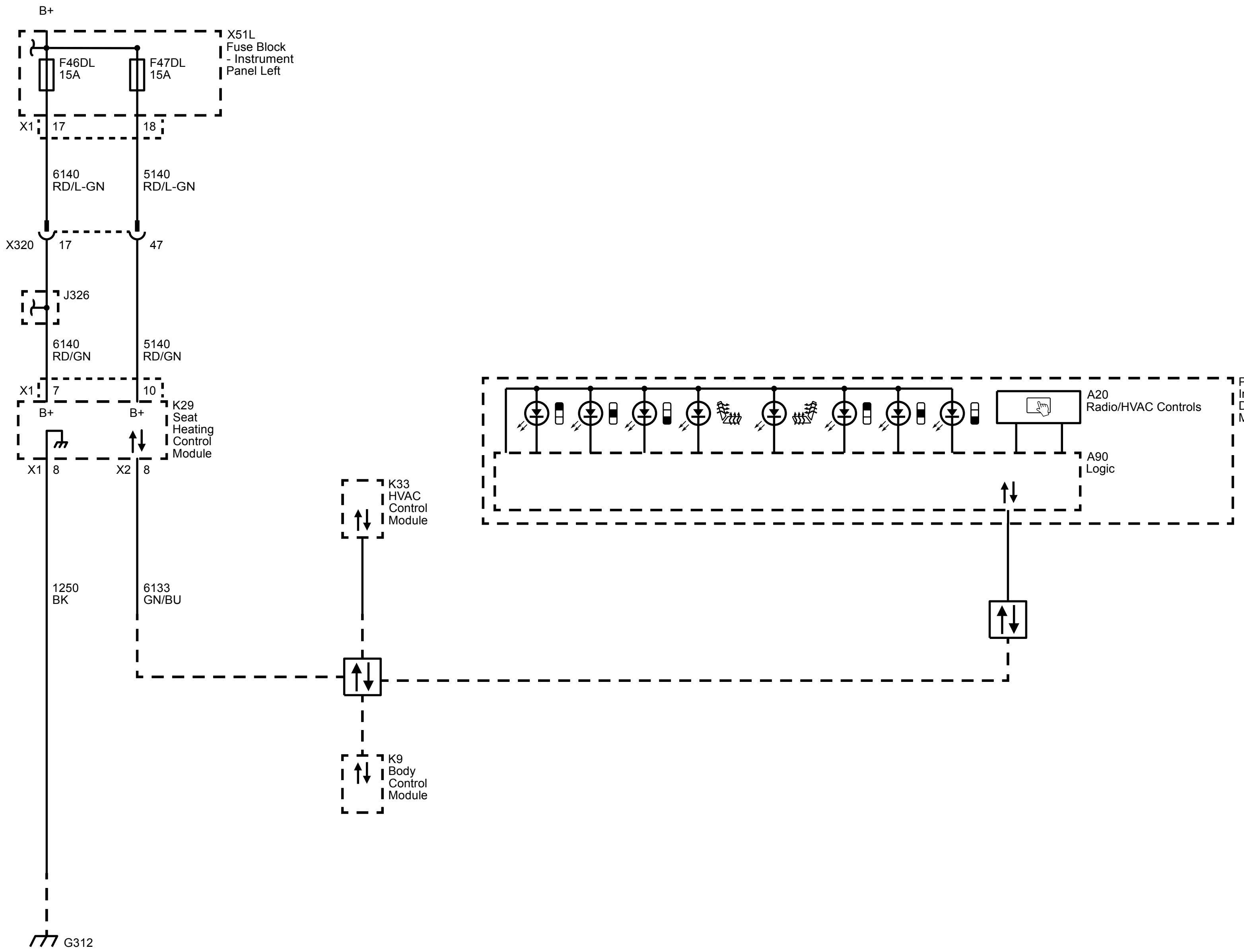
Schematic and Routing Diagrams

Heated/Cooled Seat Schematics

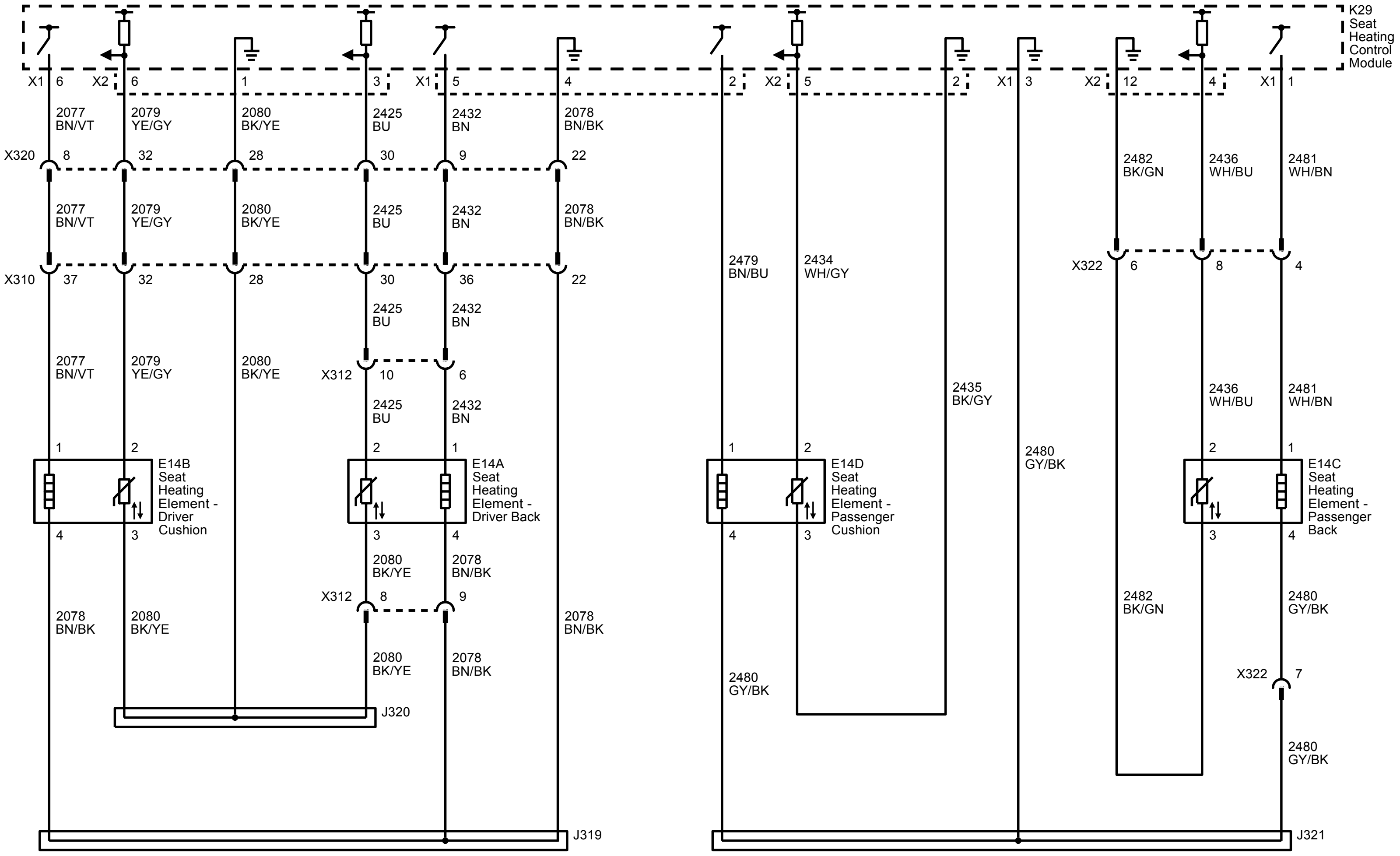
Power, Ground, Serial Data and Switches (X88/Z88+KQV)


B+
X51L
Fuse Block
- Instrument
Panel Left
F46DL
15A
F47DL
15A
F39DL
10A
X1
17
18
X2
35
6140
RD/L-GN
5140
RD/L-GN
2840
RD/GY
X320
17
6140
RD/GN
47
5140
RD/GN
KQV
-KQV
J326
6140
RD/GN
J220
2840
RD/GY
4
2840
RD/GY
1
S31D
Seat
Heating and
Cooling
Switch -
Driver
S31P
Seat
Heating and
Cooling
Switch -
Passenger
KQV
A90
Logic
B+
X1
7
10
K29
Seat
Heating
Control
Module
B+
B+
X1
8
X2
8
1250
BK
6133
GN/BU
1
1850
BK
3
7527
L-GN/WH
4
1850
BK
2
7527
L-GN/WH
K9
Body
Control
Module
G312
G218

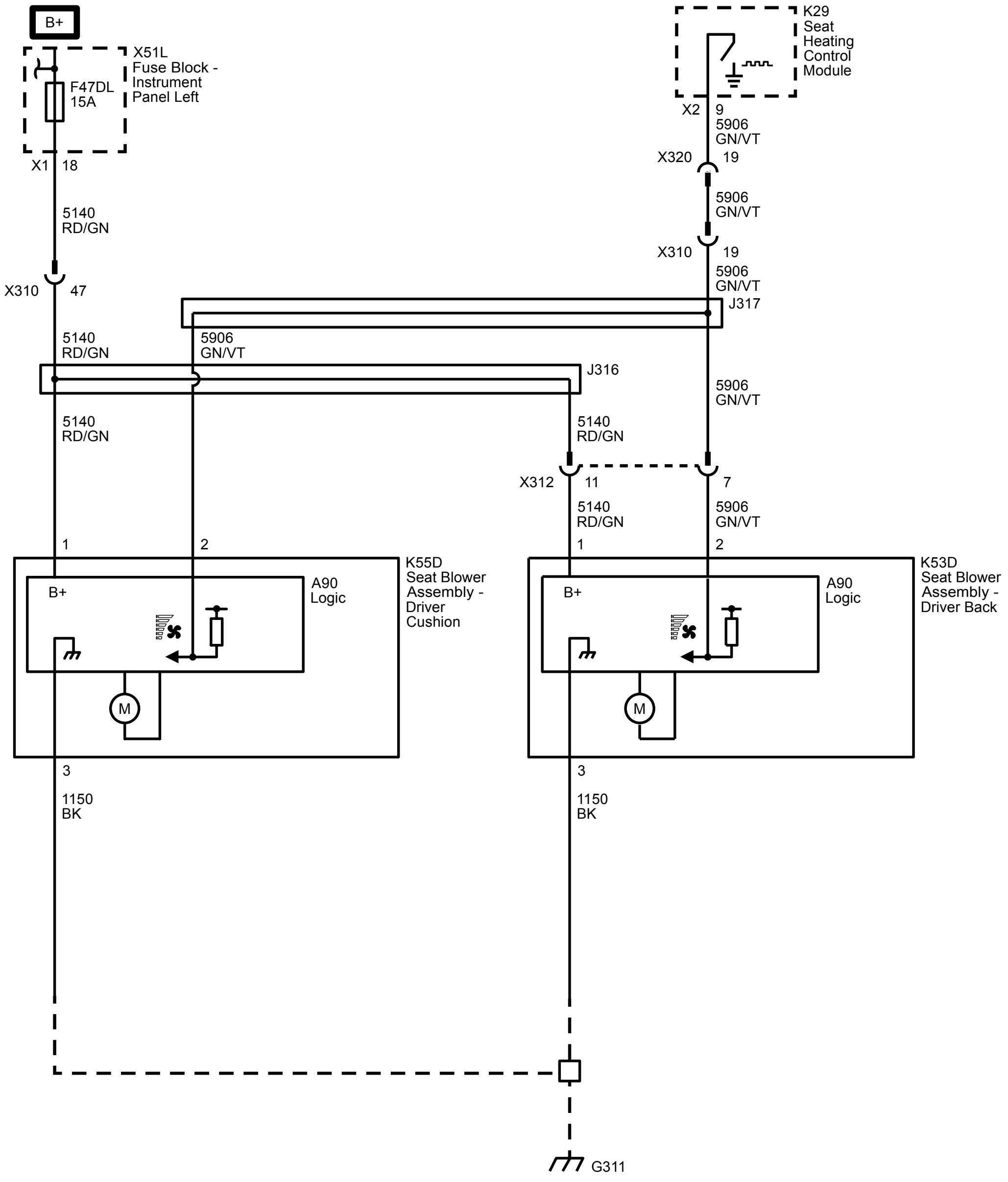
Power, Ground, Serial Data and Switches (Z75+KB6)


B+
X51L
Fuse Block
- Instrument
Panel Left
F46DL
15A
F47DL
15A
X1
17
18
6140
RD/L-GN
5140
RD/L-GN
X320
17
47
J326
6140
RD/GN
5140
RD/GN
X1
7
10
B+
B+
K29
Seat
Heating
Control
Module
X1
8
X2
8
1250
BK
6133
GN/BU
G312
K33
HVAC
Control
Module
K9
Body
Control
Module
A20
Radio/HVAC Controls
P17
Info
Display
Module
A90
Logic

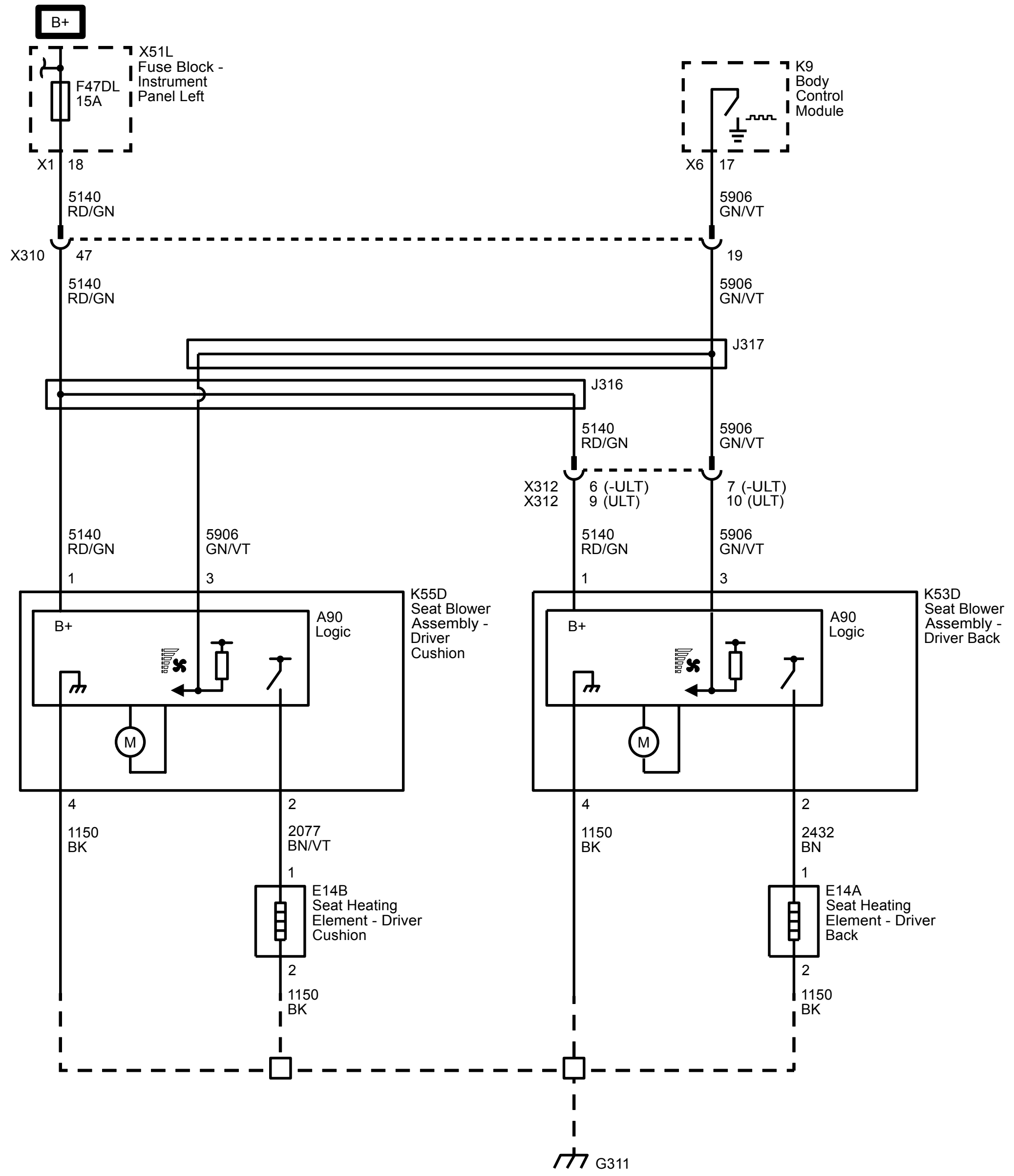
Front Seat Heating Elements (X88/Z88+KQV)


K29 Seat Heating Control Module
X1 6
X2 6
1
3
X1 5
4
2
X2 5
2
X1 3
X2 12
4
X1 1
2077 BN/VT
2079 YE/GY
2080 BK/YE
2425 BU
2432 BN
2078 BN/BK
X320 8
32
28
30
9
22
2482 BK/GN
2436 WH/BU
2481 WH/BN
X310 37
32
28
30
36
22
2479 BN/BU
2434 WH/GY
X322 6
8
4
X312 10
6
2435 BK/GY
2480 GY/BK
E14B Seat Heating Element - Driver Cushion
E14A Seat Heating Element - Driver Back
E14D Seat Heating Element - Passenger Cushion
E14C Seat Heating Element - Passenger Back
1
2
4
3
X312 8
9
X322 7
J320
J319
J321

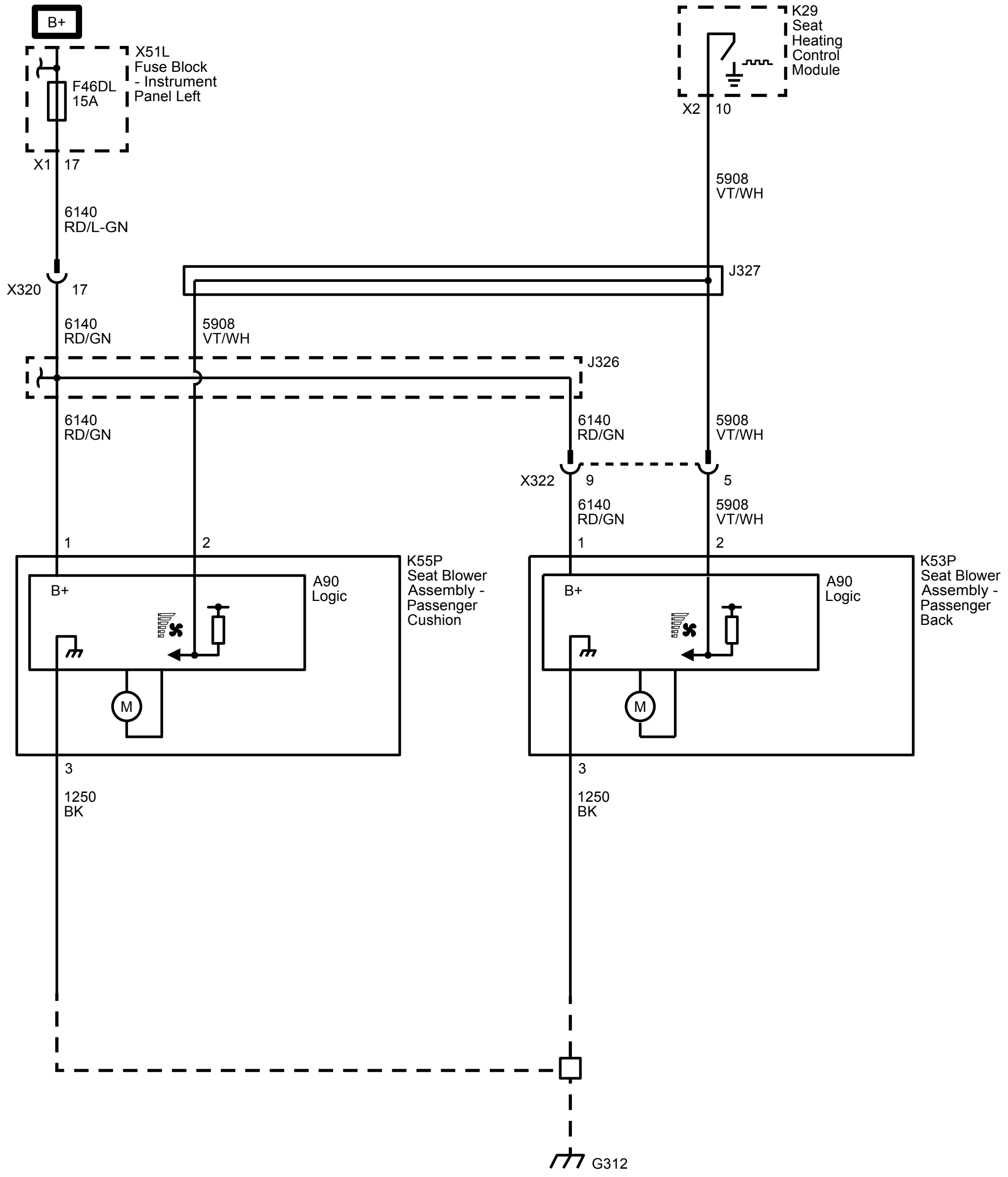
Driver Seat (X88/Z88+KQV)


B+
X51L
Fuse Block -
Instrument
Panel Left
F47DL
15A
X1
18
5140
RD/GN
X310
47
5140
RD/GN
5140
RD/GN
K29
Seat
Heating
Control
Module
X2
9
5906
GN/VT
X320
19
5906
GN/VT
X310
19
5906
GN/VT
J317
5906
GN/VT
J316
5906
GN/VT
5140
RD/GN
X312
11
7
5140
RD/GN
5906
GN/VT
1
2
B+
A90
Logic
K55D
Seat Blower
Assembly -
Driver
Cushion
M
3
1150
BK
1
2
B+
A90
Logic
K53D
Seat Blower
Assembly -
Driver Back
M
3
1150
BK
G311

Driver Seat (Z75+KB6)

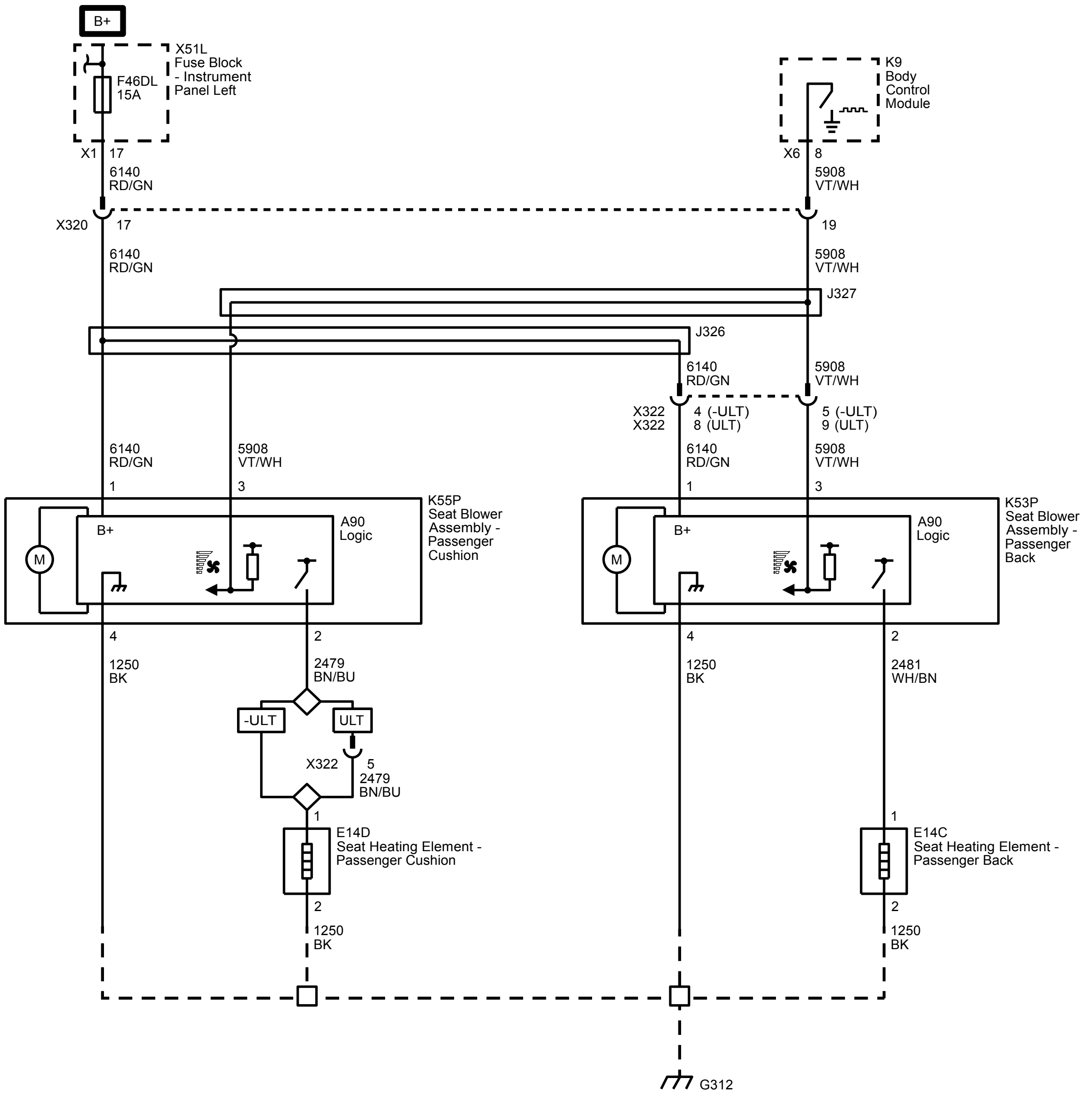

B+
X51L
Fuse Block -
Instrument
Panel Left
F47DL
15A
X1
18
K9
Body
Control
Module
X6
17
5140
RD/GN
5906
GN/VT
X310
47
19
J317
J316
X312
X312
6 (-ULT)
9 (ULT)
7 (-ULT)
10 (ULT)
1
3
K55D
Seat Blower
Assembly -
Driver
Cushion
A90
Logic
M
K53D
Seat Blower
Assembly -
Driver Back
4
2
1150
BK
2077
BN/VT
2432
BN
E14B
Seat Heating
Element - Driver
Cushion
E14A
Seat Heating
Element - Driver
Back
G311

Passenger Seat (X88/Z88+KQV)


B+
X51L
Fuse Block
- Instrument
Panel Left
F46DL
15A
X1 17
6140
RD/L-GN
X320 17
6140
RD/GN
5908
VT/WH
J326
J327
K29
Seat
Heating
Control
Module
X2 10
5908
VT/WH
6140
RD/GN
5908
VT/WH
X322 9
5
6140
RD/GN
5908
VT/WH
1
2
B+
A90
Logic
M
K55P
Seat Blower
Assembly -
Passenger
Cushion
1
2
B+
A90
Logic
M
K53P
Seat Blower
Assembly -
Passenger
Back
3
1250
BK
3
1250
BK
G312

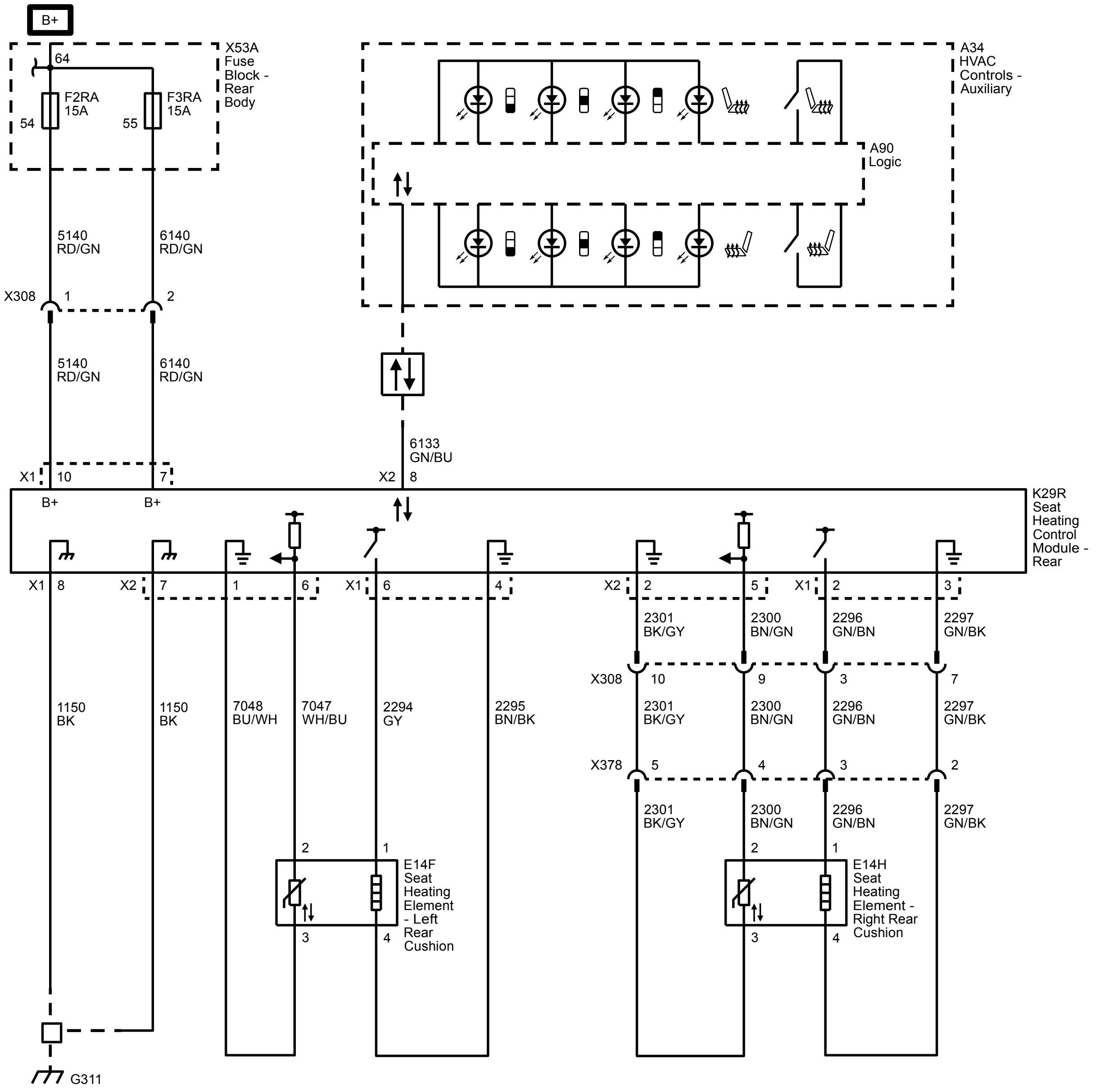
LOC
DESC

Passenger Seat (Z75+KB6)

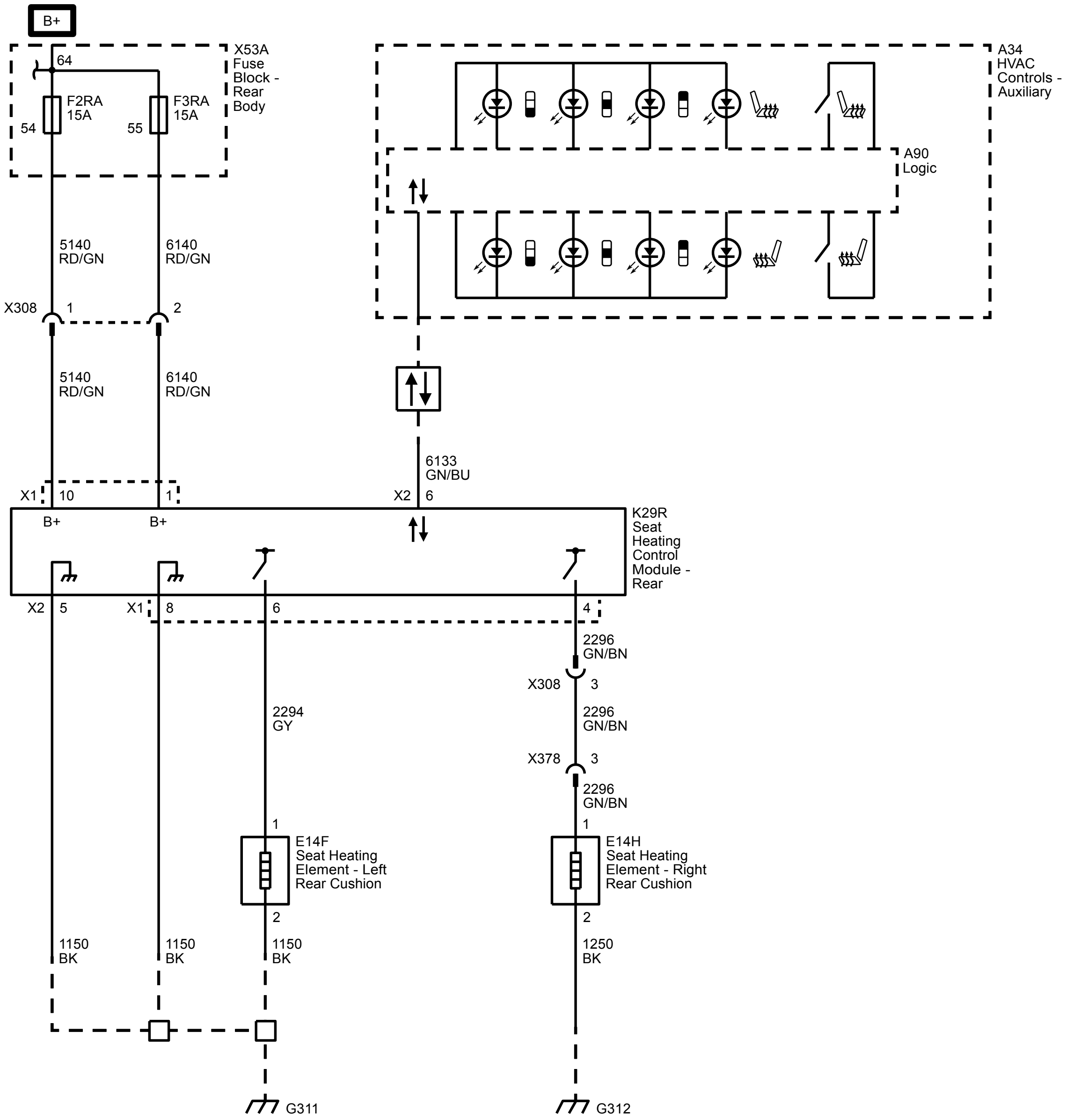


B+
X51L
Fuse Block
- Instrument
Panel Left
F46DL
15A
X1 17
6140
RD/GN
K9
Body
Control
Module
X6 8
5908
VT/WH
X320 17
6140
RD/GN
19
5908
VT/WH
J327
J326
6140
RD/GN
5908
VT/WH
X322 4 (-ULT)
X322 8 (ULT)
5 (-ULT)
9 (ULT)
6140
RD/GN
5908
VT/WH
6140
RD/GN
5908
VT/WH
1
3
1
3
K55P
Seat Blower
Assembly -
Passenger
Cushion
A90
Logic
B+
M
K53P
Seat Blower
Assembly -
Passenger
Back
A90
Logic
B+
M
4
2
4
2
1250
BK
2479
BN/BU
-ULT
ULT
X322
5
2479
BN/BU
1
E14D
Seat Heating Element -
Passenger Cushion
2
1250
BK
1250
BK
2481
WH/BN
1
E14C
Seat Heating Element -
Passenger Back
2
1250
BK
G312

Rear Seats (X88/Z88+KA6)

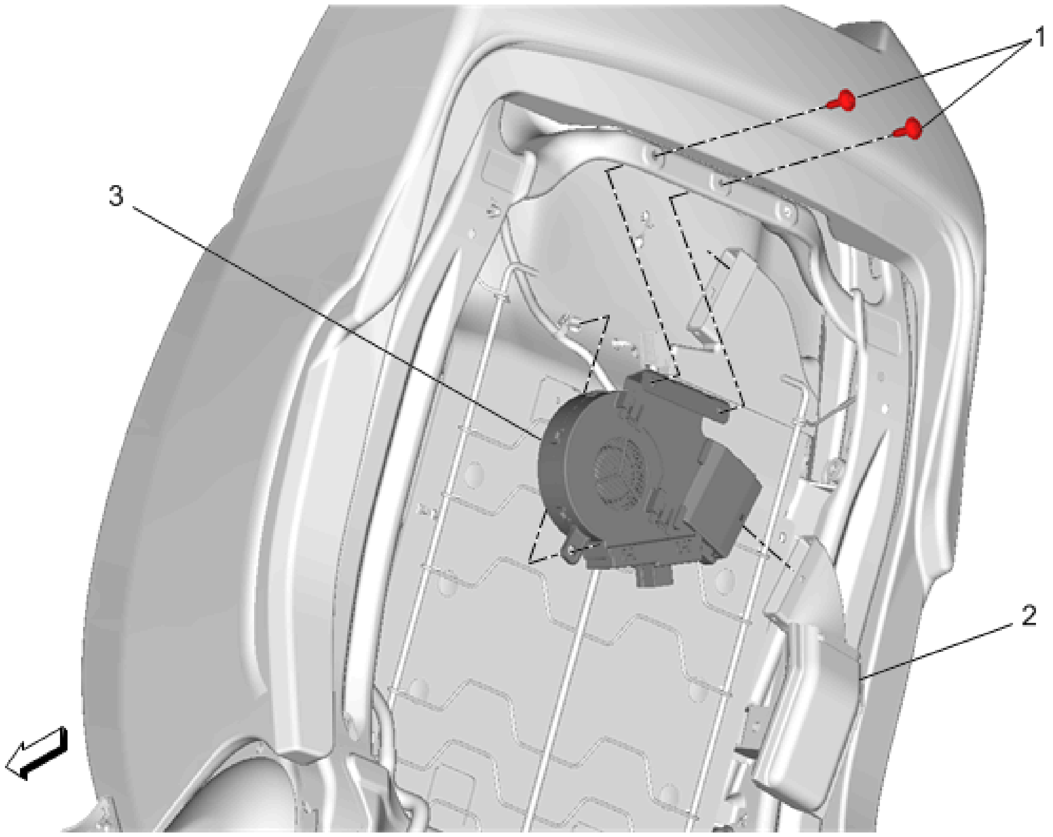

B+
X53A Fuse Block - Rear Body
64
F2RA 15A
F3RA 15A
54
55
A34 HVAC Controls - Auxiliary
A90 Logic
5140 RD/GN
6140 RD/GN
X308
1
2
5140 RD/GN
6140 RD/GN
6133 GN/BU
X1
10
7
X2
8
B+
B+
K29R Seat Heating Control Module - Rear
X1
8
X2
7
1
6
X1
6
4
X2
2
5
X1
2
3
2301 BK/GY
2300 BN/GN
2296 GN/BN
2297 GN/BK
X308
10
9
3
7
1150 BK
1150 BK
7048 BU/WH
7047 WH/BU
2294 GY
2295 BN/BK
2301 BK/GY
2300 BN/GN
2296 GN/BN
2297 GN/BK
X378
5
4
3
2
2301 BK/GY
2300 BN/GN
2296 GN/BN
2297 GN/BK
2
1
E14F Seat Heating Element - Left Rear Cushion
3
4
2
1
E14H Seat Heating Element - Right Rear Cushion
3
4
G311

LOC
DESC


B+
X53A
Fuse
Block -
Rear
Body
64
F2RA
15A
54
F3RA
15A
55
5140
RD/GN
6140
RD/GN
X308
1
2
5140
RD/GN
6140
RD/GN
A34
HVAC
Controls -
Auxiliary
A90
Logic
6133
GN/BU
X1
10
1
X2
6
B+
B+
K29R
Seat
Heating
Control
Module -
Rear
X2
5
X1
8
6
4
2296
GN/BN
X308
3
2296
GN/BN
X378
3
2296
GN/BN
2294
GY
1
E14F
Seat Heating
Element - Left
Rear Cushion
2
1
E14H
Seat Heating
Element - Right
Rear Cushion
2
1150
BK
1150
BK
1150
BK
1250
BK
G311
G312

Repair Instructions

Front Seat Back Ventilation Blower Replacement (22-Way Power)



Front Seat Back Ventilation Blower Replacement (22-Way Power)

Callout	Component Name
Preliminary Procedure CELL Link Error - Link target cell (cell ID 57155) is invalid for this publication.	
1	Front Seat Back Ventilation Blower Bolt [2x] **Caution:** Refer to CELL Link Error - Link target cell (cell ID 178169) is invalid for this publication.. **Tighten:** 4 Y (35 lb in)
2	Front Seat Back Ventilation Duct
3	Front Seat Back Ventilation Blower **Procedure** **1.** Disconnect the electrical connector. **2.** Transfer components as necessary.

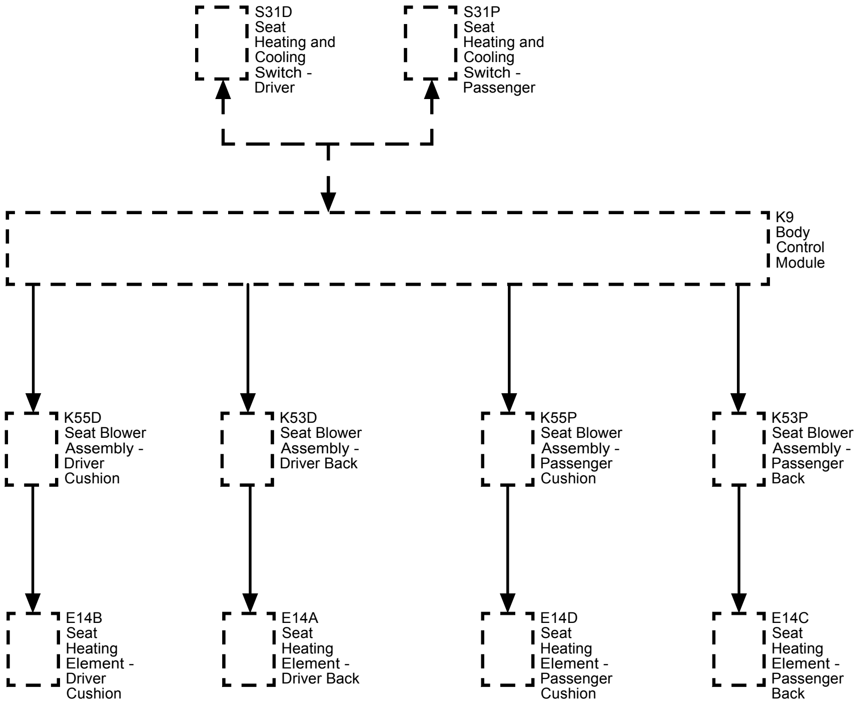
Description and Operation

Heated/Cooled Seats Description and Operation (Cadillac with KB6)

The driver and front passenger heated cooled seat system consist of the following components:

- Heated/cooled seat switches
- Body control module
- Seat cushion blower assembly
- Seat back blower assembly
- Seat cushion heating element
- Seat back heating element

Heated and Cooled Seat Block Diagram


S31D Seat Heating and Cooling Switch - Driver
S31P Seat Heating and Cooling Switch - Passenger
K9 Body Control Module
K55D Seat Blower Assembly - Driver Cushion
K53D Seat Blower Assembly - Driver Back
K55P Seat Blower Assembly - Passenger Cushion
K53P Seat Blower Assembly - Passenger Back
E14B Seat Heating Element - Driver Cushion
E14A Seat Heating Element - Driver Back
E14D Seat Heating Element - Passenger Cushion
E14C Seat Heating Element - Passenger Back

Body Control Module

The body control module (BCM) monitors the heated cooled seat switches through LIN bus message inputs and determines the heated cooled seat operating modes and temperature levels. Each heated cooled seat is capable of operating in 3 modes with 3 temperature levels. The BCM controls the operating mode of the driver and passenger seats through separate pulse width modulation (PWM) signal circuits. Each mode and temperature level is commanded by a different Duty Cycle. The PWM signal circuits are referenced from battery voltage by the blower assemblies and pulsed low by the BCM.

Seat Blower Assembly Power and Ground

Battery positive voltage is supplied at all times to the seat blower assemblies through a 30 A fuse that is located in the I/P fuse block. This voltage is to supply power to the TEDs, the blower motors, and the seat heater elements. The heated and cooled seat system will operate only with the ignition in the ON position. Each seat blower assembly is grounded through the ground circuit and ground connection.

Seat Blower Assembly

Each heated/cool seat has 2 blower assemblies, one located under the seat cushion and one located in the seat back. Each blower assembly contains a thermo-electric device (TED) and a blower motor. The TED is mounted downstream of the blower motor. Each TED consists of a circuit of positive and negative connections sandwiched between 2 ceramic plates. Each ceramic plate is equipped with copper fins for cool exchange. The air flowing past these fins is directed as conditioned air into the seat cushion and seat back or directed into the cabin as waste air.

Cooled Seat Operation and Blower Motors

As mentioned above in the seat blower assembly description, each seat blower assembly is packaged with a TED, blower motor, and it also contains logic that will allow for the blower to operate only when the ignition is in the ON position and only during cooled seat operation. When a cooled seat switch is pressed, the seat blower assembly applies a pre-determined voltage to the TED and blower motor. Then based on the feedback from a internal seat temperature sensor, the blower assembly controls the applied voltage to the TEDs and blower motors in order to maintain the desired seat temperature.

With cooled seat operation, the speed of the blower motor is not related directly to the High, Med, or Low input from the heated/cool seat switch. The speed of the blower motor is related directly to TED temperature. In order for the cooled seat system to operate to its optimum performance, it is crucial to have unrestricted air flow through the system. A dirty or restricted air filter, the blockage of an exhaust air duct, a misaligned blower assembly, or incorrect foam installation of the seat cushion or seat back will all have negative effects on the cooled seat system operation.

Modes of Operation

There are 3 modes available for the heated and cooled seat system operation; seat back and cushion heat, back only heat, and cool seat operation. When a heat or cool seat mode signal request is received, both the seat cushion and seat back blower assemblies will be activated. When the seat BACK ONLY mode button is pressed, the seat cushion blower assembly is turned off leaving the seat back blower assembly ON.

Heated Seat Operation

When the seat blower motor assembly receives a heated seat command, it applies a high side drive pulse width modulated (PWM) signals driven at the required duty cycles to generate the appropriate effective voltage to the heating elements to attain the commanded seat temperature.

This heated seat system utilizes a self-regulating heating element system, which is different from the non-regulated heating element systems with seat temperature sensors previously used on GM vehicles. In the self-regulating type of system, temperature feedback to a control module is not required for temperature regulation. The heating element material itself regulates the surface temperature based on the effective voltage applied to the heating element.

Heated/Vented Seat Description and Operation (Chevrolet or GMC with KQV)

Heated/Vented Seat Components

The heated/vented seat system consists of the following components:

- Heated and vented seat switches
- Body control module
- Seat heating control module
- Driver seat cushion heating element
- Driver seat cushion temperature sensor
- Driver seat back heating element
- Driver seat back temperature sensor
- Driver seat temperature control module
- Driver seat cushion blower motor
- Driver seat back blower motor
- Passenger seat cushion heating element
- Passenger seat cushion temperature sensor
- Passenger seat back heating element
- Passenger seat back temperature sensor
- Passenger seat temperature control module
- Passenger seat cushion blower motor
- Passenger seat back blower motor

Heated/Vented Seat Switches

The driver and passenger heated and vented seats are controlled by separate heated/vented seat switches located on the center stack near the HVAC controls. To operate the engine must be running. The BCM is the heated and vented seat system master. It monitors heated/vented seat switch activations to determine user requested operating mode. Based on the requested operating mode, the BCM sends a LIN Bus serial data message to the Seat Heating Control Module how to drive the self-regulated heating pads or ventilation motors. The BCM also controls the indicators used to provide the operator with feedback as to the operating status of the system. With each press of the switch, the system will cycle through High, Medium, Low, and then back to Off again. The BCM also controls the seat temperature and mode indicators, via the serial data line, used to provide the operator with feedback as to the operating status of the system.

Heated Seat Operation

The seat heating control module controls heated seat operation for the driver and passenger seats. There are two modes for heated seat operation; seat back and cushion heat mode and seat back only heat mode. When active, power is applied to the seat cushion and back heater elements through individual pulse width modulated (PWM) voltage supply control circuits. Each individual heater element is switched to ground by the module through a common low side drive control circuit.

When inactive the seat heating control module connects the heating element low side outputs to a common reference point internal to the module which is biased to approximately 3.5 V. The module uses this biased voltage in order to check the high side and low side control circuits for a short to battery or ground before enabling the driver and passenger seat heating elements. During heated seat operation, the seat heating control module interrupts control of the heating elements every 10 s for approximately 10 ms to make this biased voltage check.

With both the seat cushion and seat back heater elements disconnected, if the high side output of the module is measured it will display a low current 12 V bleed off voltage. This bleed off voltage does not have a meaningful diagnostic purpose. With the heater element connected you would just see the 3.5 V biased voltage from this circuit.

Temperature Regulation

The seat back and cushion temperature sensors (thermistors) are packaged with the seat heating elements located just under the seat covers. The seat heating control module supplies each temperature sensor with a 5 V reference signal circuit and a low reference circuit. The module monitors the voltage from the signal circuit to determine the temperature of the seat.

The temperature sensor varies in resistance based on the temperature of the heating element causing the signal voltage to change. Once the module senses the seat reached the set temperature, it will then begin regulate the current flow through the heater elements in order to maintain the desired seat temperature based on the feedback voltage from the sensor.

If the heated seats are on high, the temperature level may automatically be lowered after approximately 30 min of operation.

Vented Seat Operation

Each vented seat system consists of 2 blower motors; one in the seat back and one in the seat cushion. During vented seat operation, the vented seat blower motors move cabin air through channels in the foam pad and small holes in the seat covers causing a cooling effect to the occupant.

Battery voltage is supplied to the blower motors through a 15 A fuse located in the left instrument panel fuse block. Ground for each blower motor is provided through separate ground circuits and a common ground connection.

When the seat heating control module receives a ventilation seat command, it sends a low side drive pulse width modulation (PWM) signal through the blower motor control circuit to each blower motor indicating the seat ventilation command. The logic in the blower motors interprets this signal then sets the blower speed to the switch set point. The blower motors run causing a cooling effect to the occupant.

Heated and Vented Seat Operation During Remote Start

Refer to Vehicle Personalization in the Owner’s Manual for Remote Start Auto Heated and Ventilation Seats.

During remote start, the heated seats will turn ON when the ambient temperature is below 10° C (50° F).

During remote start, the seat ventilation system will turn ON when the ambient temperature is above 27° C (80° F).

Load Shed Management

The electrical power management function is designed to monitor the vehicle electrical load and determine when the battery is potentially in a high discharge condition. The heated seat system is one of the vehicle loads that is subject to reduction during a battery discharge condition. For more information on load management refer to Electrical Power Management Description and Operation.

Rear Heated Seats Description and Operation (Cadillac)

Rear Heated Seat Components

The rear heated seat system has one control module that controls heat operation for both the left and right rear seat. The rear heated seats system consists of the following components:

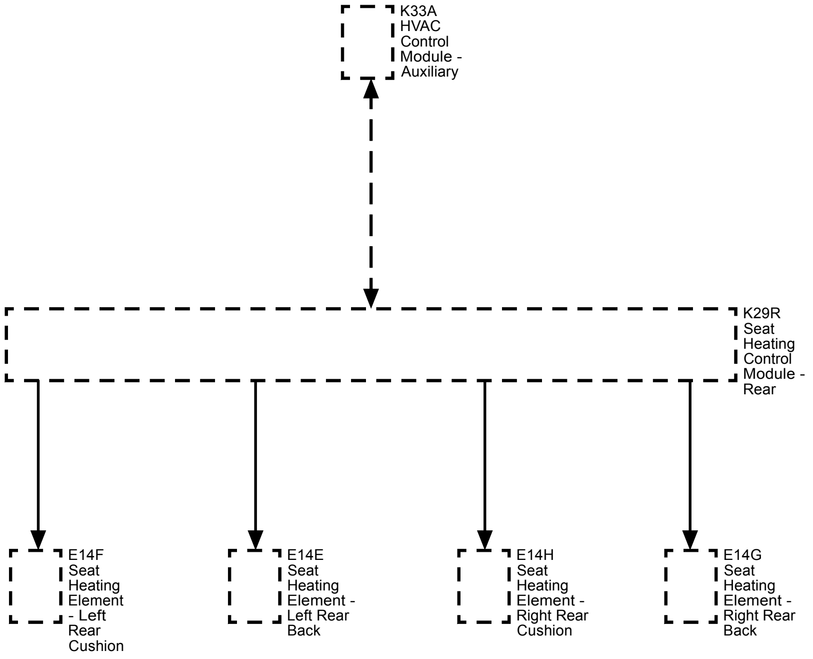
- Rear seat heating control module
- Body control module
- Auxiliary HVAC control module
- Left rear seat heating switch
- Right rear seat heating switch
- Left seat cushion heating element
- Left seat back heating element
- Right seat cushion heating element
- Right seat back heating element

Rear Seat Heating Control Module Power and Ground

Battery positive voltage is supplied to the rear seat heating control module through a fuse located in the rear fuse block. This voltage is used to power up the rear seat heating control module and to supply power to the seat heater elements. Ground for the rear seat heating control module is provided at the module connection.

Rear Heated Seat Operation

Rear Heated Seat Block Diagram


K33A HVAC Control Module - Auxiliary
K29R Seat Heating Control Module - Rear
E14F Seat Heating Element - Left Rear Cushion
E14E Seat Heating Element - Left Rear Back
E14H Seat Heating Element - Right Rear Cushion
E14G Seat Heating Element - Right Rear Back

The rear seat heated seat switches are located in the auxiliary HVAC control module. When a heated seat switch is pressed, a serial data message is sent from the auxiliary HVAC control module to the HVAC control module indicating the heated seat request. The HVAC control module serves as a gateway to transmit the message to the rear seat heating control module via the serial data line. In response to this message, the rear seat heating control module applies battery voltage through the heater element control circuits to the appropriate seat heating elements.

When the seat heating control module receives a heated seat command, it applies high side drive pulse width modulated (PWM) signals driven at the required duty cycles to generate the appropriate effective voltage to the heating elements to attain the commanded seat temperature.

The rear seat heating system utilizes a self-regulating heating element system, which is different from the non-regulated heating element systems with temperature sensors previously used on GM vehicles. In the self-regulating type of system, temperature feedback to a control module is not required for temperature regulation. The heating element material itself regulates the surface temperature based on the effective voltage applied to the heating element.

Load Shed Management

The electrical power management function is designed to monitor the vehicle electrical load and determine when the battery is potentially in a high discharge condition. The heated/cooled seat system is one of the vehicle loads that is subject to reduction during a battery discharge condition. For more information on load management refer to Electrical Power Management Description and Operation.

Rear Heated Seats Description and Operation (Chevrolet or GMC)

Heated Seat Components

The rear heated seat system consists of the following components:

- Rear heated seat switches
- Body control module
- Rear seat heating control module
- Left rear seat cushion heating element
- Left rear seat cushion temperature sensor
- Right rear seat cushion heating element
- Right rear seat cushion temperature sensor

Heated Seat Switches

When a heated seat switch is pressed, a serial data message is sent to the body control module (BCM) indicating the heated seat command. The BCM serves as the heated seat system master to determine the requested operating mode. The BCM then sends a LIN bus serial data message to the rear seat heating control module indicating the heated seat command. In response to this message, the seat heating control module attempts to drive the appropriate seat heating element per the BCM command.

Rear Heated Seat Operation

The rear seat heating control module controls heated seat operation for the left and right rear seats. When active, power is applied to the seat cushion and back heater elements through a common pulse width modulated (PWM) voltage supply control circuit. Each individual heater element is switched to ground by the module through a common low side drive control circuit.

When inactive the rear seat heating control module connects the heating element low side outputs to a common reference point internal to the control module which is biased to approximately 3.5 V. The control module uses this biased voltage in order to check the high side and low side control circuits for a short to battery or ground before enabling either the left or right rear seat heating element. During heated seat operation, the control module interrupts control of the heating elements every 10 s for approximately 10 ms to make this biased voltage check.

Temperature Regulation

The seat cushion temperature sensor (thermistors) is packaged with the seat heating element located just under the seat cover. The rear seat heating control module supplies the temperature sensor with a 5 V reference signal circuit and a low reference circuit. The control module monitors the voltage from the signal circuit to determine the temperature of the seat.

The temperature sensor varies in resistance based on the temperature of the heating element causing the signal voltage to change. Once the rear seat heating control module senses the seat reached the set temperature, it will then begin regulate the current flow through the heater elements in order to maintain the desired seat temperature based on the feedback voltage from the sensor.

The temperature level may automatically be lowered after approximately 30 min of operation.

Load Shed Management

The electrical power management function is designed to monitor the vehicle electrical load and determine when the battery is potentially in a high discharge condition. The heated seat system is one of the vehicle loads that is subject to reduction during a battery discharge condition. For more information on load management refer to Electrical Power Management Description and Operation.

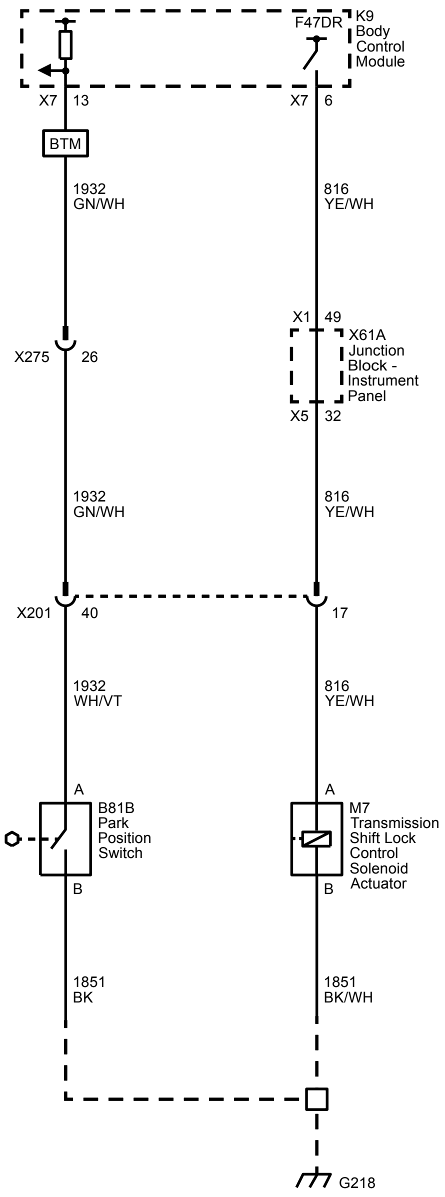
Transmission

Shift Lock Control

Schematic and Routing Diagrams

Shift Lock Control Schematics

Shift Lock Control


F47DR
K9
Body
Control
Module
X7
13
X7
6
BTM
1932
GN/WH
816
YE/WH
X1
49
X61A
Junction
Block -
Instrument
Panel
X275
26
X5
32
1932
GN/WH
816
YE/WH
X201
40
17
1932
WH/VT
816
YE/WH
A
B81B
Park
Position
Switch
B
A
M7
Transmission
Shift Lock
Control
Solenoid
Actuator
B
1851
BK
1851
BK/WH
G218

Description and Operation

Automatic Transmission Shift Lock Control Description and Operation

The automatic transmission shift lock control system is a safety device that prevents an inadvertent shift out of PARK when the engine is running. The driver must press the brake pedal before moving the shift lever out of the PARK position. The system consists of the following components:

- The automatic transmission shift lock solenoid (serviced as the automatic transmission shift lock actuator), as well as the body control module (BCM) and the engine control module (ECM). The shift lock solenoid is located within the floor shift control assembly with vehicles equipped with floor shift.
- The BCM controls the voltage to the shift lock control solenoid through the shift lock control solenoid controlled voltage circuit. The following conditions must be met before the BCM will remove voltage from the shift lock solenoid:
  - The ignition is in the ON position.
  - The engine control module (ECM) sends an input via GMLAN serial data to the BCM indicating the transmission is in the PARK position.
  - The BCM determines the brake pedal is applied according the brake pedal position.

Since the shift lock control solenoid is permanently grounded, the BCM supplies voltage to the automatic transmission shift lock control solenoid, mechanically locking the shift lever in the PARK position as the solenoid energizes. When the brake pedal is applied, the BCM turns the control voltage output of the shift lock control solenoid OFF, de-energizing the shift lock control solenoid. The de-energized solenoid releases the mechanical lock allowing the driver to move the shift lever out of the PARK position. When the transmission is out of the PARK position, the shift lock control solenoid remains de-energized.

During remote start operation, the BCM will energize the shift lock control circuit, locking the shift lever in the PARK position.